

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 17:12:23 ON 17 JAN 2007

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

2.52

2.52

FILE 'REGISTRY' ENTERED AT 17:19:24 ON 17 JAN 2007

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STRUCTURE FILE UPDATES: 16 JAN 2007 HIGHEST RN 917560-96-4

DICTIONARY FILE UPDATES: 16 JAN 2007 HIGHEST RN 917560-96-4

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=>

Uploading C:\Program Files\Stnexp\Queries\11-2.str

L1 STRUCTURE UPLOADED

=> d 11

L1 HAS NO ANSWERS

L1 STR

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

Structure attributes must be viewed using STN Express query preparation.

=> s 11 full

FULL SEARCH INITIATED 17:20:10 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 475 TO ITERATE

100.0% PROCESSED 475 ITERATIONS

98 ANSWERS

SEARCH TIME: 00.00.01

L2 98 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

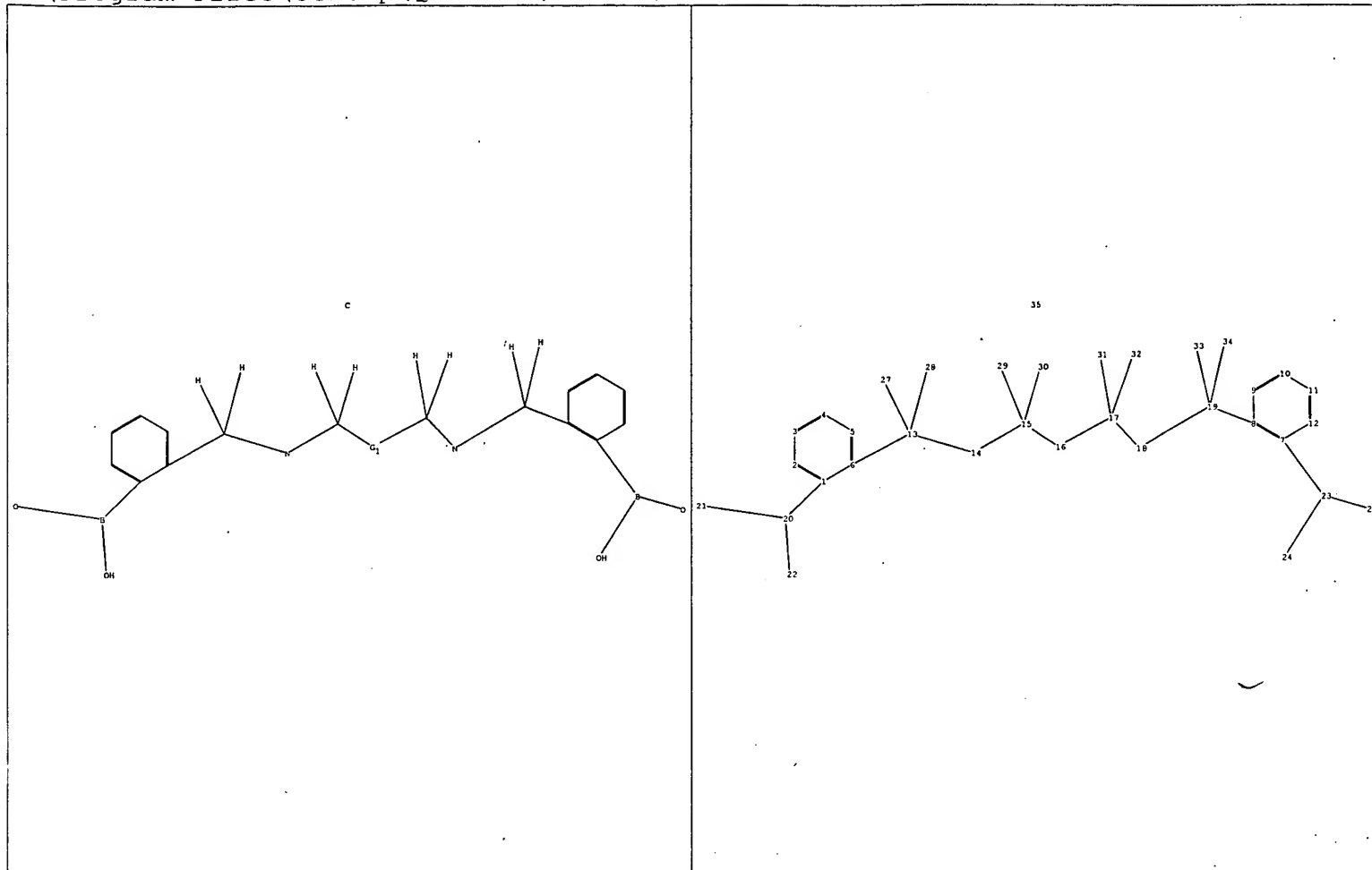
172.55

175.07

FILE 'CAPLUS' ENTERED AT 17:20:25 ON 17 JAN 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.



```

chain nodes :
  13 14 15 16 17 18 19 20 21 22 23 24 25 27 28 29 30 31 32
  33 34 35
ring nodes :
  1 2 3 4 5 6 7 8 9 10 11 12
chain bonds :
  1-20 6-13 7-23 8-19 13-14 13-27 13-28 14-15 15-16 15-29 15-30
  16-17 17-18 17-31 17-32 18-19 19-33 19-34 20-21 20-22 23-24 23-25
ring bonds :
  1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12
exact/norm bonds :
  13-14 14-15 15-16 16-17 17-18 18-19
exact bonds :
  1-20 6-13 7-23 8-19 13-27 13-28 15-29 15-30 17-31 17-32 19-33
  19-34 20-21 20-22 23-24 23-25
normalized bonds :
  1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12

```

G1:Cb,Cy

```

Match level :
  1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom
  10:Atom 11:Atom 12:Atom 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS
  18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS
  25:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS 32:CLASS
  33:CLASS 34:CLASS 35:CLASS

```

Connecting via Winsock to STN

file 11-2

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LOGINID:sssptal621con

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

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additional databases  
NEWS 9 NOV 20 CA/CAPLUS to MARPAT accession number crossover limit increased  
to 50,000  
NEWS 10 DEC 01 CAS REGISTRY updated with new ambiguity codes  
NEWS 11 DEC 11 CAS REGISTRY chemical nomenclature enhanced  
NEWS 12 DEC 14 WPIDS/WPINDEX/WPIX manual codes updated  
NEWS 13 DEC 14 GBFULL and FRFULL enhanced with IPC 8 features and  
functionality  
NEWS 14 DEC 18 CA/CAPLUS pre-1967 chemical substance index entries enhanced  
with preparation role  
NEWS 15 DEC 18 CA/CAPLUS patent kind codes updated  
NEWS 16 DEC 18 MARPAT to CA/CAPLUS accession number crossover limit increased  
to 50,000  
NEWS 17 DEC 18 MEDLINE updated in preparation for 2007 reload  
NEWS 18 DEC 27 CA/CAPLUS enhanced with more pre-1907 records  
NEWS 19 JAN 08 CHEMLIST enhanced with New Zealand Inventory of Chemicals  
NEWS 20 JAN 16 CA/CAPLUS Company Name Thesaurus enhanced and reloaded  
NEWS 21 JAN 16 IPC version 2007.01 thesaurus available on STN  
NEWS 22 JAN 16 WPIDS/WPINDEX/WPIX enhanced with IPC 8 reclassification data  
  
NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.  
  
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FILE COVERS 1907 - 17 Jan 2007 VOL 146 ISS 4  
FILE LAST UPDATED: 16 Jan 2007 (20070116/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> d l1  
L1 HAS NO ANSWERS  
L1 STR  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

Structure attributes must be viewed using STN Express query preparation.

=> s l1 full  
REGISTRY INITIATED  
Substance data SEARCH and crossover from CAS REGISTRY in progress...  
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 17:20:40 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 475 TO ITERATE

100.0% PROCESSED 475 ITERATIONS 98 ANSWERS  
SEARCH TIME: 00.00.01

L3 98 SEA SSS FUL L1

L4 32 L3

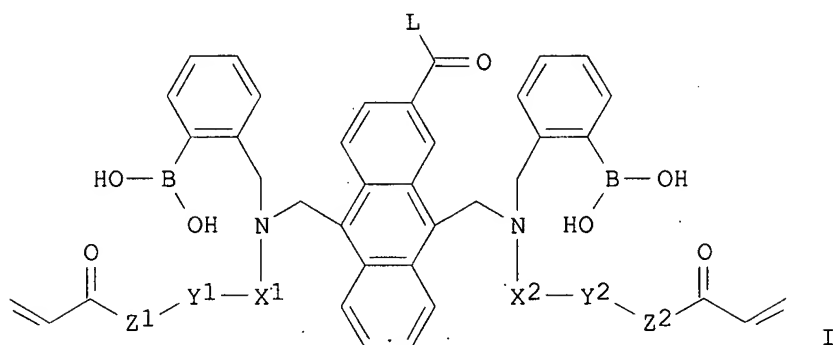
=> d l4 ibib abs hitstr 1-32

L4 ANSWER 1 OF 32. CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2006:363151 CAPLUS  
DOCUMENT NUMBER: 144:419779  
TITLE: Fluorescent monomer compounds and blood sugar  
level-detecting sensing substances and their use in  
body implant  
INVENTOR(S): Kawanishi, Tetsuo; Ochiai, Shoji  
PATENT ASSIGNEE(S): Terumo Corp., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese



FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006104140	A	20060420	JP 2004-294413	20041007
PRIORITY APPLN. INFO.: GI			JP 2004-294413	20041007



AB The title substances particularly useful for diabetic patients, are obtained from the copolymers of (meth)acrylamide monomers and comonomers bearing sugar-bondable hydrophobic groups which become fluorescent after bonding with sugar and have hydrophilic groups. Suitable comonomers are compds. having structure of I (X1,X2 = COO, OCO, CH2NR, Natural Rubber, NRCO, CONR, SO2NR, NRSO2, O, S, SS, NRCOO, OCONR, CO, C1-30 alkylene; R = H, alkyl; Z1,Z2 = O, NR'; R' = H, alkyl; Y1,Y2 = linking groups; L = C1-10 alkyl groups).

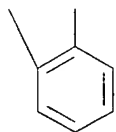
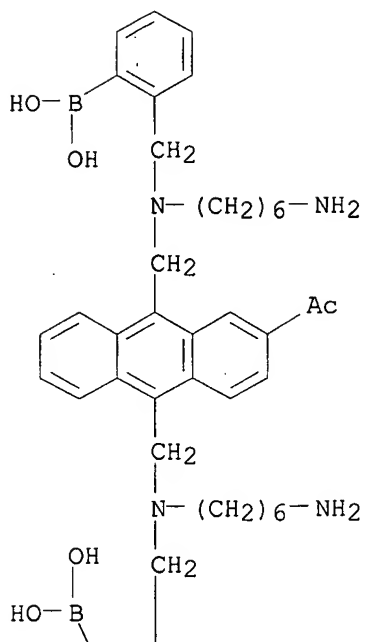
IT 790257-35-1P 883724-03-6P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

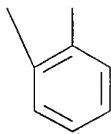
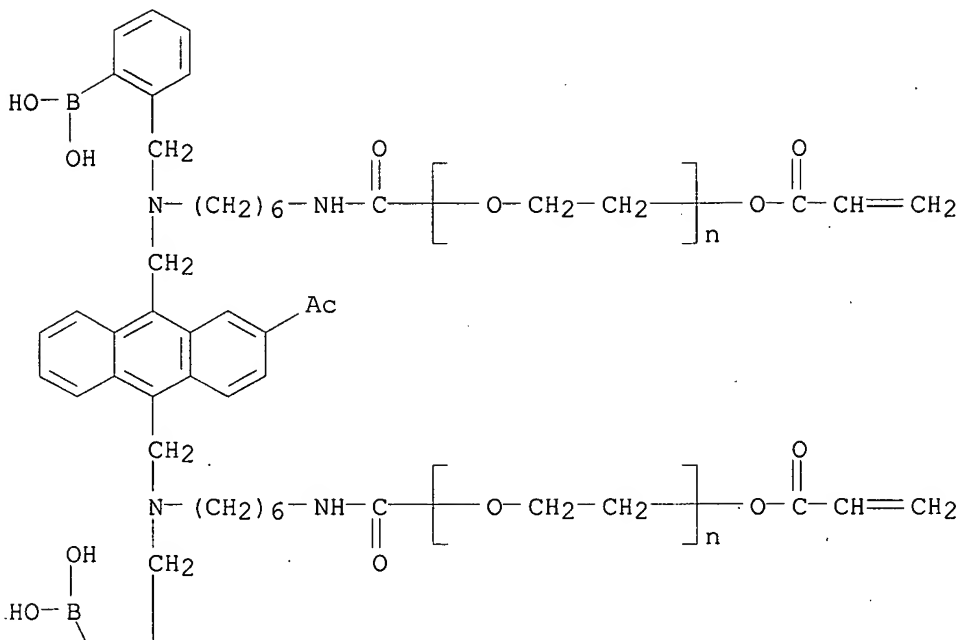
(manufacture of fluorescent copolymers for implantable blood sugar level-detecting sensors)

RN 790257-35-1 CAPLUS

CN Boronic acid, [(2-acetyl-9,10-anthracenediyl)bis[methylene[(6-aminoethyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



RN 883724-03-6 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha,\alpha'$ -[ (2-acetyl-9,10-anthracenediyl)bis[methylene[[ (2-boronophenyl)methyl]imino]-6,1-hexanediyliminocarbonyl]]bis[ $\omega$ -[(1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)



IT 883724-04-7P  
 RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (manufacture of fluorescent copolymers for implantable blood sugar level-detecting sensors)

RN 883724-04-7 CAPLUS

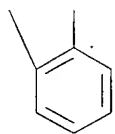
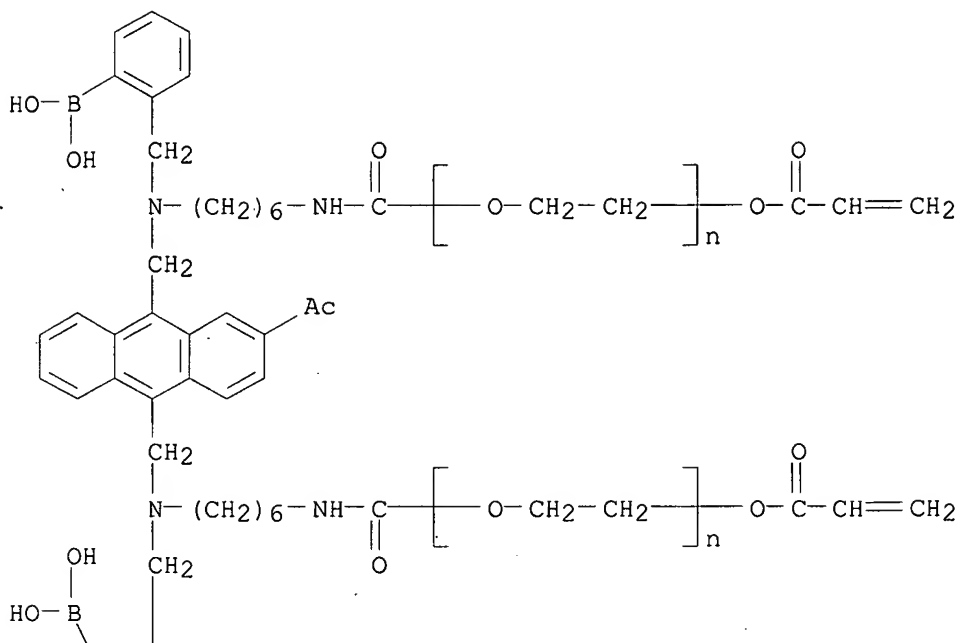
CN 2-Propenamide, N,N'-methylenebis-, polymer with  $\alpha,\alpha'$ -[(2-acetyl-9,10-anthracenediyl)bis[methylene[[ (2-boronophenyl)methyl]imino]-6,1-hexanediyiminocarbonyl]]bis[ $\omega$ -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 883724-03-6

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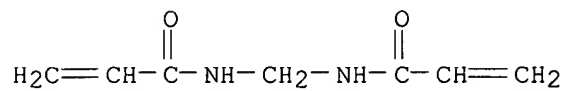
CCI PMS



CM 2

CRN 110-26-9

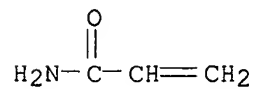
CMF C7 H10 N2 O2



CM 3

CRN 79-06-1

CMF C3 H5 N O



ACCESSION NUMBER: 2006:69817 CAPLUS  
 DOCUMENT NUMBER: 144:159854  
 TITLE: Glucose-measuring fluorescent monomer,  
 glucose-measuring fluorescent sensor polymer  
 substance, and implantable glucose-measuring sensor  
 INVENTOR(S): Ochiai, Shouji; Kawanishi, Tetsuro; Matsumoto, Atsushi  
 PATENT ASSIGNEE(S): Terumo Kabushiki Kaisha, Japan  
 SOURCE: Eur. Pat. Appl., 41 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1619229	A1	20060125	EP 2005-15807	20050720
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
JP 2006036664	A	20060209	JP 2004-216535	20040723
JP 2006111719	A	20060427	JP 2004-299991	20041014
US 2006020182	A1	20060126	US 2005-187821	20050725
PRIORITY APPLN. INFO.:			JP 2004-216535	A 20040723
			JP 2004-299991	A 20041014
OTHER SOURCE(S):		MARPAT 144:159854		
GI				

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The fluorescent monomer compds. are represented by formula (I), where Q, Q' and D3 may be the same or different, may be combined together into a fused ring, and are, for example, H, a halogen atom, OH, or a substituted or unsubstituted alkyl group; and D1, D2 and D4 each represent a substituent with a vinyl group at the end. The fluorescent monomer compds. are soluble in water. Me 9,10-dimethylantracene-2-carboxylate was successively brominated at 9,10-methyls, methylaminated, and reacted with 2-(bromomethyl)benzeneboronic acid protected as a dioxaborinane. After hydrolysis, thus obtained anthracene-2-carboxylic acid (70 mg) was amidated by 1-acrylamido-6-amino-hexane to give the target fluorescent monomer 9,10-bis[[N-methyl-N-(ortho-boronobenzyl)amino]methyl]anthracene (85 mg). The fluorescent sensor substance was prepared either by (1) direct copolymn. of the fluorescent monomer with acrylamide at different ratios (producing copolymers containing fluorescent monomer:acrylamide molar ratios from 1:10 to 1:3874), or by (2) amidation of the above intermediate anthracene-2-carboxylic acid with amino- and acrylamido-terminated PEG3400 followed by copolymn. with acrylamide. The prepared polymers were used in phosphate buffer (pH 7) solns. as glucose-measuring fluorescent sensors. The polymer concentration was adjusted so that absorbance at 265 nm would

become 0.05; the glucose concentration was 500 mg/dL. The best result was obtained in method (2) with relative fluorescence intensity I/I<sub>0</sub> about 7 (excitation 405 nm, emission 442 nm). The copolymer of synthesized compound (II) with acrylamide and N,N'-methylenebis(acrylamide) was immobilized on a glass support, and the detector layer was prepared. The detector layer was held in place on the evaluation device, and the fluorescence response to glucose at varied concns. under phosphate buffer (pH 7) was measured (I/I<sub>0</sub> = 10, excitation 400 nm, emission 480 nm, glucose concentration 500 mg/dL).

IT 790257-25-9P 790257-31-7P 790257-35-1P  
 873555-23-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

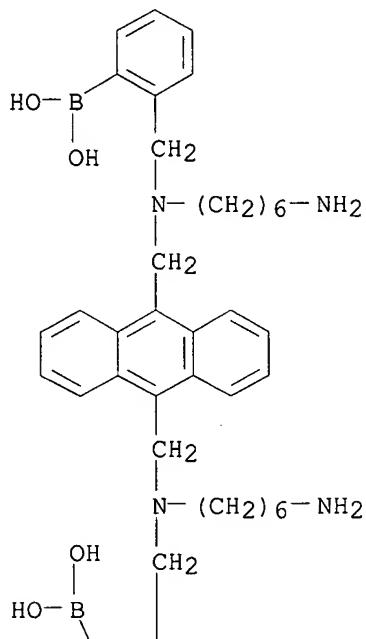
(Reactant or reagent)

(amidation; glucose-measuring fluorescent monomer, glucose-measuring fluorescent sensor polymer substance, and implantable glucose-measuring sensor)

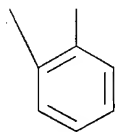
RN 790257-25-9 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene[(6-aminohexyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

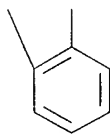
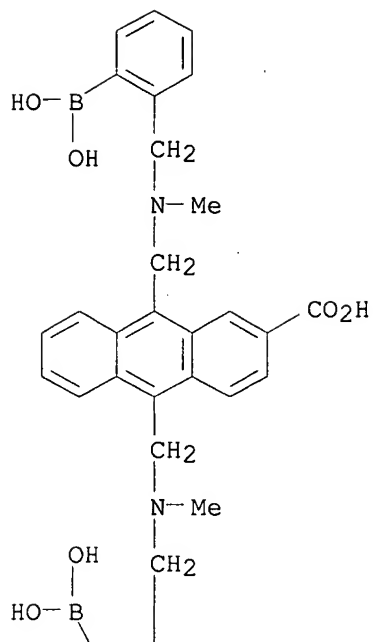


PAGE 2-A

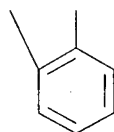
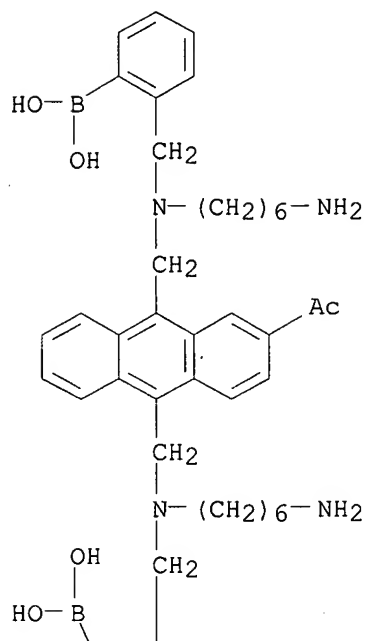


RN 790257-31-7 CAPLUS

CN 2-Anthracenecarboxylic acid, 9,10-bis[[[(2-boronophenyl)methyl]methylamino]methyl]- (9CI) (CA INDEX NAME)

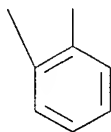
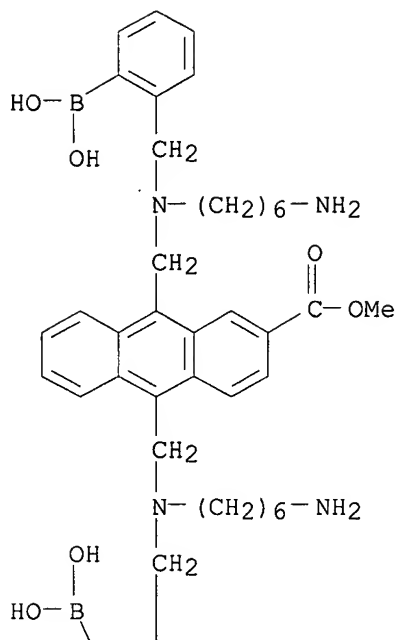


RN 790257-35-1 CAPLUS  
 CN Boronic acid, [(2-acetyl-9,10-anthracenediyl)bis[methylene[(6-aminohexyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



RN 873555-23-8 CAPLUS  
 CN 2-Anthracenecarboxylic acid, 9,10-bis[[(6-aminohexyl)[(2-boronophenyl)methyl]amino]methyl]-, 2-methyl ester (9CI) (CA INDEX NAME)

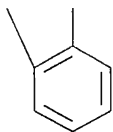
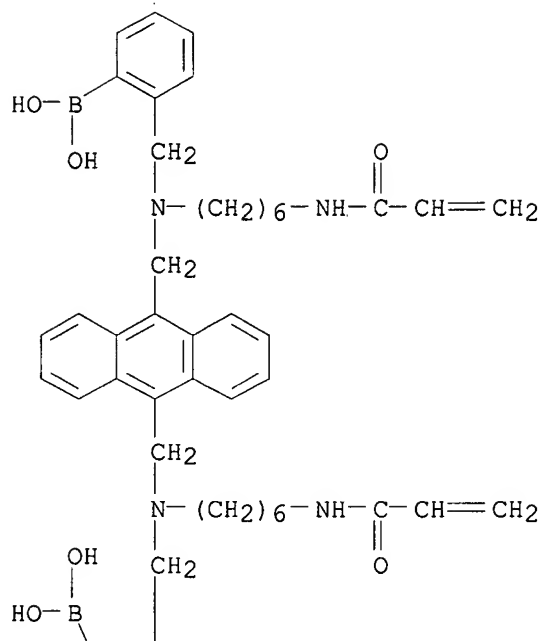




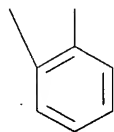
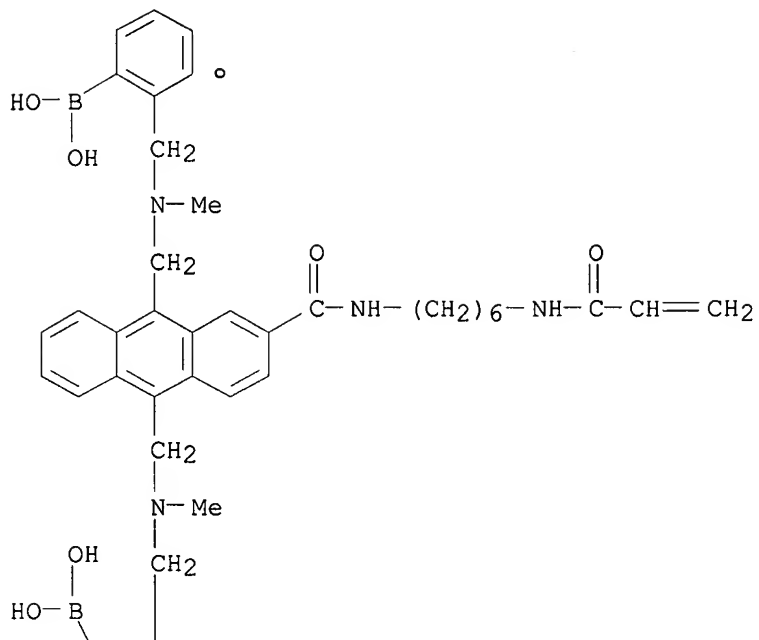
IT 873555-16-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (comparative example; copolymn.; glucose-measuring fluorescent monomer, glucose-measuring fluorescent sensor polymer substance, and implantable glucose-measuring sensor)

RN 873555-16-9 CAPLUS

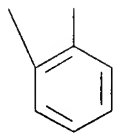
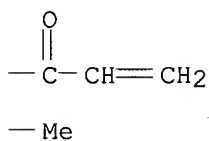
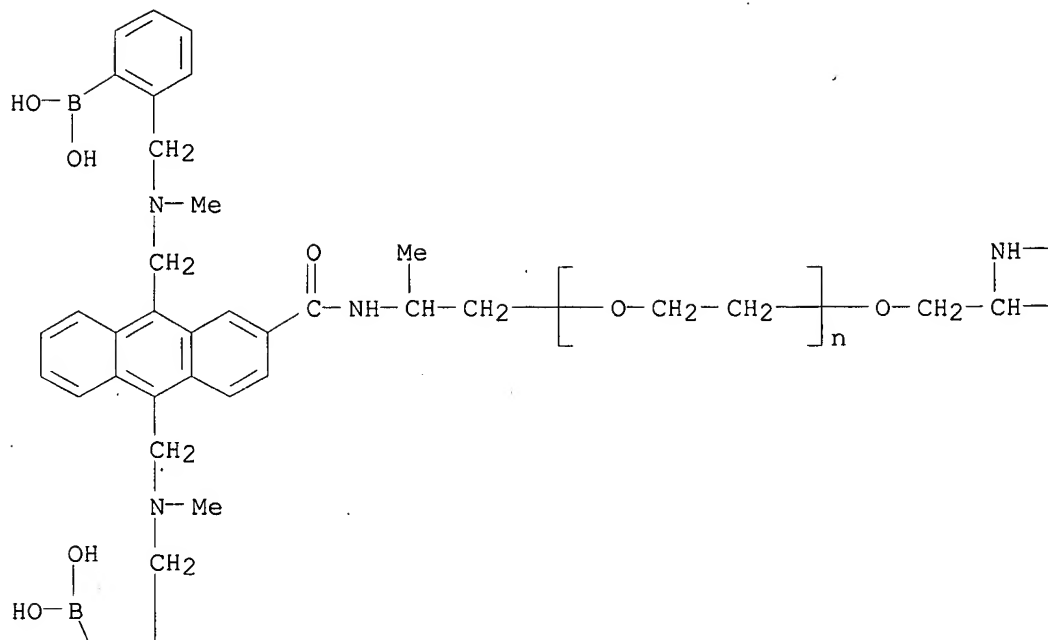
CN Boronic acid, [9,10-anthracenediylbis[methylene[[6-[(1-oxo-2-propenyl)amino]hexyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



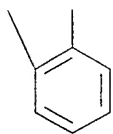
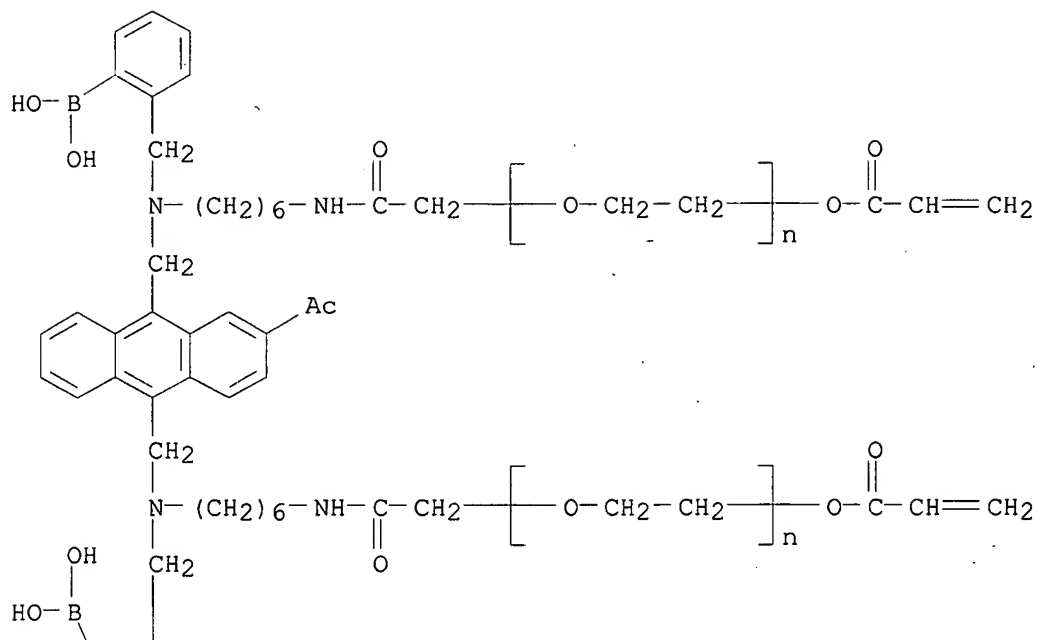
IT 873555-09-0P 873555-10-3P 873555-19-2P  
 873555-24-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (copolymn.; glucose-measuring fluorescent monomer, glucose-measuring  
 fluorescent sensor polymer substance, and implantable glucose-measuring  
 sensor)  
 RN 873555-09-0 CAPLUS  
 CN Boronic acid, [[2-[[[6-[(1-oxo-2-propenyl)amino]hexyl]amino]carbonyl]-9,10-  
 anthracenediyl]bis[methylene(methylimino)methylene-2,1-phenylene]]bis-  
 (9CI) (CA INDEX NAME)



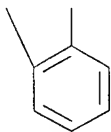
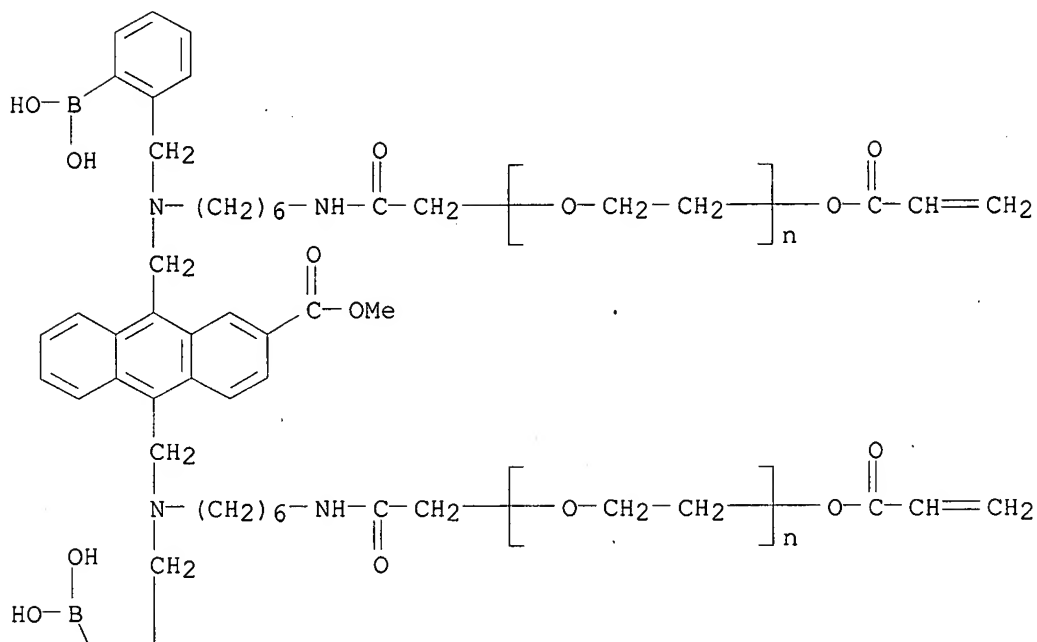
RN 873555-10-3 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -[2-[[[9,10-bis[[[(2-boronophenyl)methyl]methylamino]methyl]-2-anthracenyl]carbonyl]amino]propyl]- $\omega$ -[2-[(1-oxo-2-propenyl)amino]propoxy]- (9CI) (CA INDEX NAME)



RN 873555-19-2 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha,\alpha'$ -[ (2-acetyl-9,10-anthracenediyl)bis[methylene[[(2-boronophenyl)methyl]imino]-6,1-hexanediylimino(2-oxo-2,1-ethanediyl)]]bis[ $\omega$ -[(1-oxo-2-propenyl)oxy]-(9CI) (CA INDEX NAME)



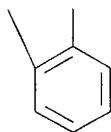
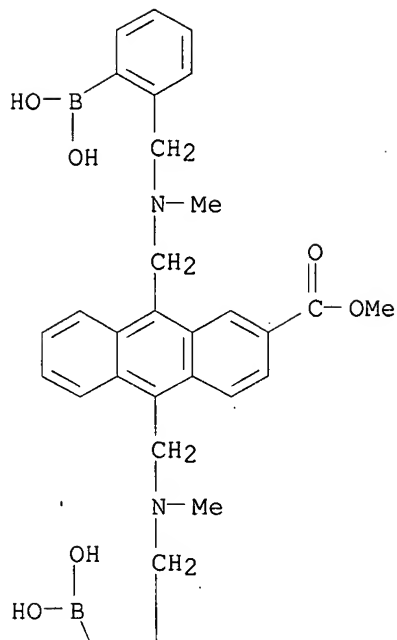
RN 873555-24-9 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha, \alpha'$ -[[2-(methoxycarbonyl)-9,10-anthracenediyl]bis[methylene[(2-boronophenyl)methyl]imino]-6,1-hexanediylimino(2-oxo-2,1-ethanediyl)]]bis[ $\omega$ -[(1-oxo-2-propenyl)oxy]-(9CI) (CA INDEX NAME)



IT 790257-30-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (ester hydrolysis; glucose-measuring fluorescent monomer,  
 glucose-measuring fluorescent sensor polymer substance, and implantable  
 glucose-measuring sensor)

RN 790257-30-6 CAPLUS

CN 2-Anthracenecarboxylic acid, 9,10-bis[[[(2-boronophenyl)methyl]methylamino  
 ]methyl]-, 2-methyl ester (9CI) (CA INDEX NAME)



IT 873555-17-0P 873555-26-1P  
 RL: ARG (Analytical reagent use); DEV (Device component use); DGN (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (glass-supported; comparative example; glucose-measuring fluorescent monomer, glucose-measuring fluorescent sensor polymer substance, and implantable glucose-measuring sensor)

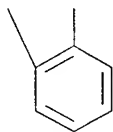
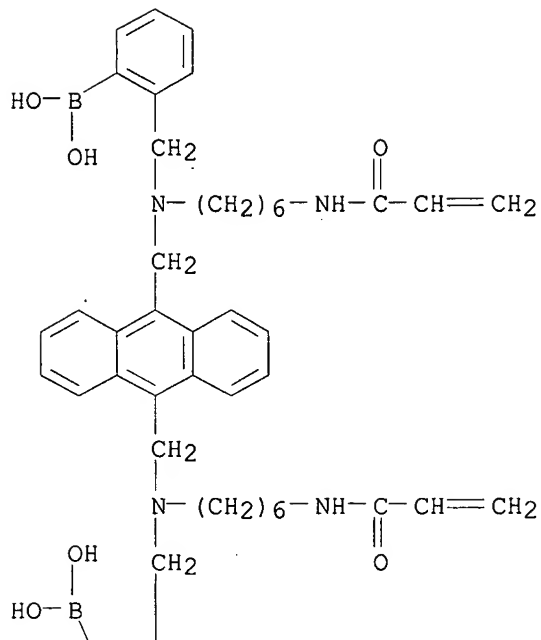
RN 873555-17-0 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene[[6-[(1-oxo-2-propenyl)amino]hexyl]imino]methylene-2,1-phenylene]]bis-, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

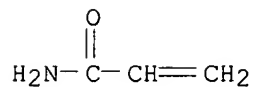
CRN 873555-16-9

CMF C48 H60 B2 N4 O6



CM 2

CRN 79-06-1  
CMF C3 H5 N O

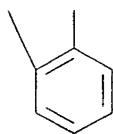
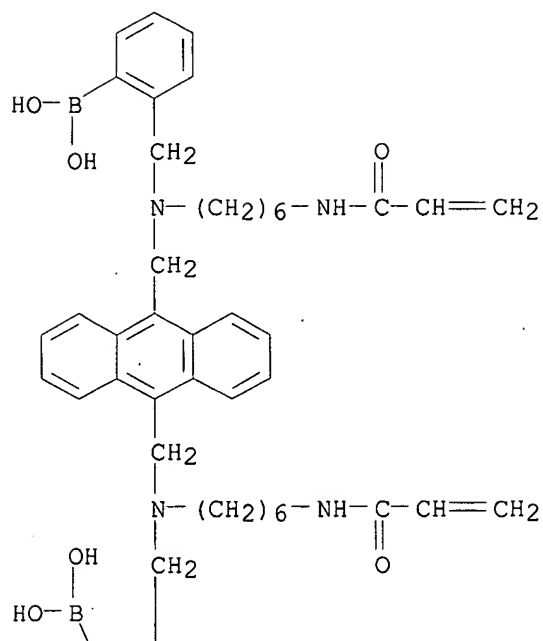


RN 873555-26-1 CAPLUS  
CN Boronic acid, [9,10-anthracenediylbis[methylene{[6-[(1-oxo-2-propenyl)amino]hexyl]imino}methylene-2,1-phenylene]]bis-, polymer with N,N'-methylenebis[2-propenamide] and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

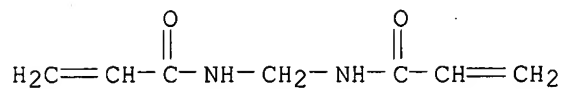
CRN 873555-16-9  
CMF C48 H60 B2 N4 O6





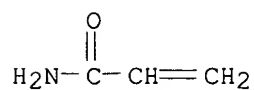
CM 2

CRN 110-26-9  
CMF C7 H10 N2 O2



CM 3

CRN 79-06-1  
CMF C3 H5 N O



IT 873555-20-5P 873555-25-0P  
RL: ARG (Analytical reagent use); DEV (Device component use); DGN

(Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study);  
 BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (glass-supported; glucose-measuring fluorescent monomer,  
 glucose-measuring fluorescent sensor polymer substance, and implantable  
 glucose-measuring sensor)

RN 873555-20-5 CAPLUS

CN 2-Propenamide; N,N'-methylenebis-, polymer with  $\alpha,\alpha'$ -[(2-acetyl-9,10-anthracenediyl)bis[methylene[(2-boronophenyl)methyl]imino]-6,1-hexanediylimino(2-oxo-2,1-ethanediyl)]]bis[ $\omega$ -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and 2-propenamide (9CI) (CA INDEX NAME)

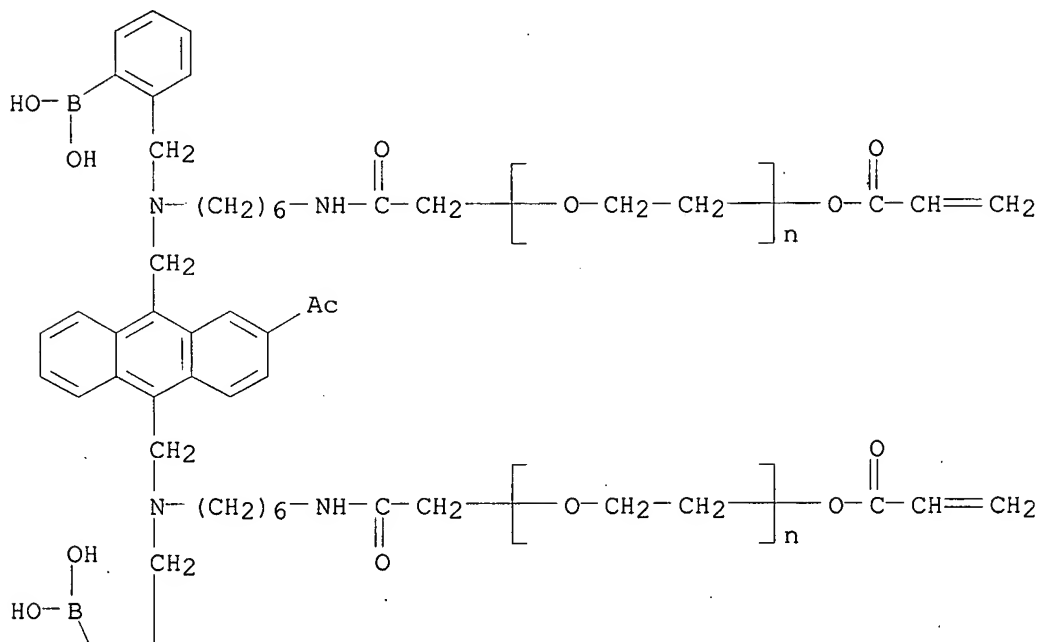
CM 1

CRN 873555-19-2

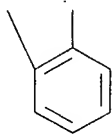
CMF (C2 H4 O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C54 H66 B2 N4 O11

CCI PMS

PAGE 1-A



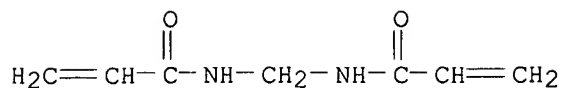
PAGE 2-A



CM 2

CRN 110-26-9

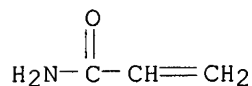
CMF C7 H10 N2 O2



CM 3

CRN 79-06-1

CMF C3 H5 N O



RN 873555-25-0 CAPLUS

CN 2-Propenamide, N,N'-methylenebis-, polymer with  $\alpha,\alpha'$ -[[2-(methoxycarbonyl)-9,10-anthracenediyl]bis[methylene[(2-boronophenyl)methyl]imino]-6,1-hexanediylimino(2-oxo-2,1-ethanediyl)]]bis[ $\omega$ -[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and 2-propenamide (9CI) (CA INDEX NAME)

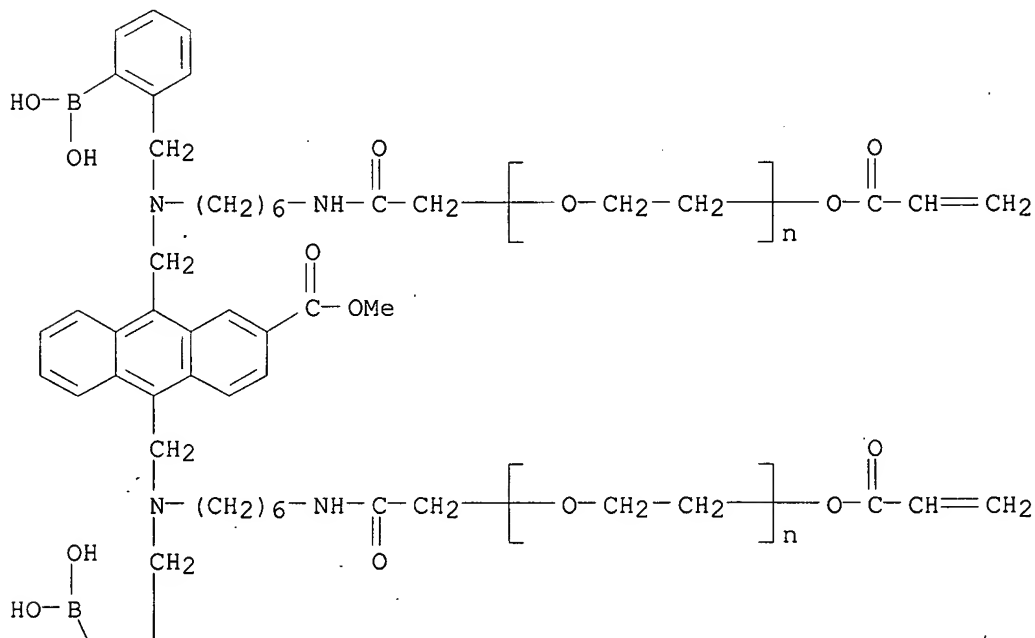
CM 1

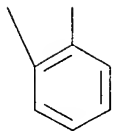
CRN 873555-24-9

CMF (C2 H4' O)<sub>n</sub> (C2 H4 O)<sub>n</sub> C54 H66 B2 N4 O12

CCI PMS

PAGE 1-A

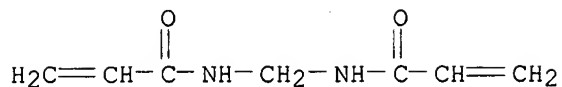




CM 2

CRN 110-26-9

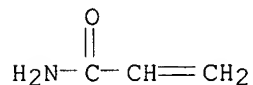
CMF C7 H10 N2 O2



CM 3

CRN 79-06-1

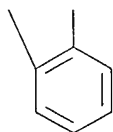
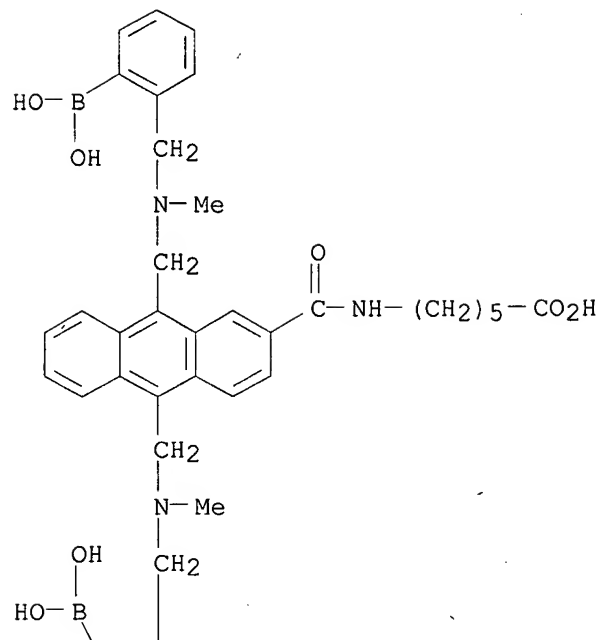
CMF C3 H5 N O



IT 873555-14-7DP, immobilized on poly(acrylamide) membrane  
 RL: ARG (Analytical reagent use); DEV (Device component use); DGN  
 (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study);  
 BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (glucose-measuring fluorescent monomer, glucose-measuring fluorescent  
 sensor polymer substance, and implantable glucose-measuring sensor)

RN 873555-14-7 CAPLUS

CN Hexanoic acid, 6-[[[9,10-bis[[[(2-boronophenyl)methyl]methylamino]methyl]-  
 2-anthracenyl]carbonyl]amino]- (9CI) (CA INDEX NAME)



IT 873555-11-4P 873555-12-5P  
 RL: ARG (Analytical reagent use); DGN (Diagnostic use); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (glucose-measuring fluorescent monomer, glucose-measuring fluorescent sensor polymer substance, and implantable glucose-measuring sensor)

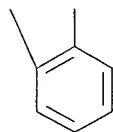
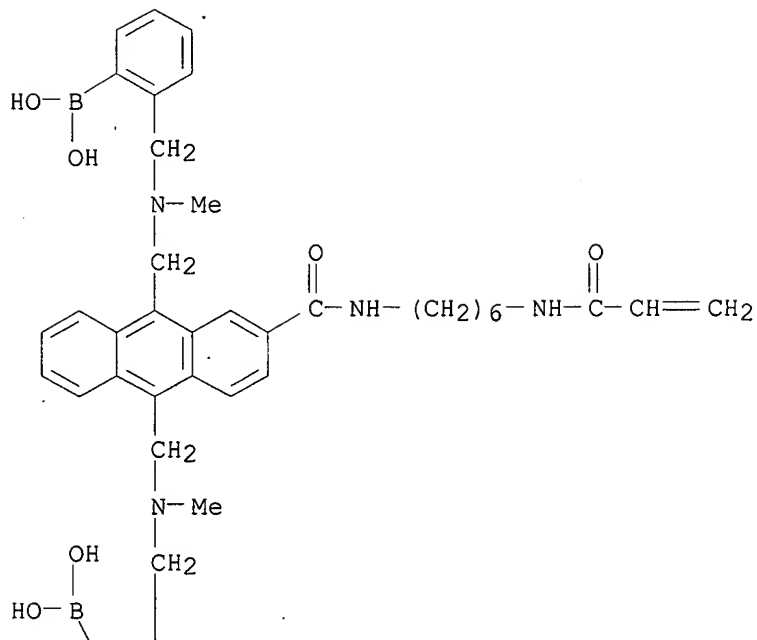
RN 873555-11-4 CAPLUS

CN Boronic acid, [[2-[[[6-[(1-oxo-2-propenyl)amino]hexyl]amino]carbonyl]-9,10-anthracenediyl]bis[methylene(methylimino)methylene-2,1-phenylene]]bis-, polymer with 2-propenamide (9CI) . (CA INDEX NAME)

CM 1

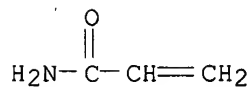
CRN 873555-09-0

CMF C42 H50 B2 N4 O6



CM 2

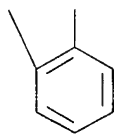
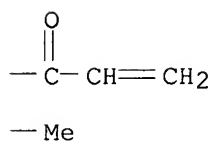
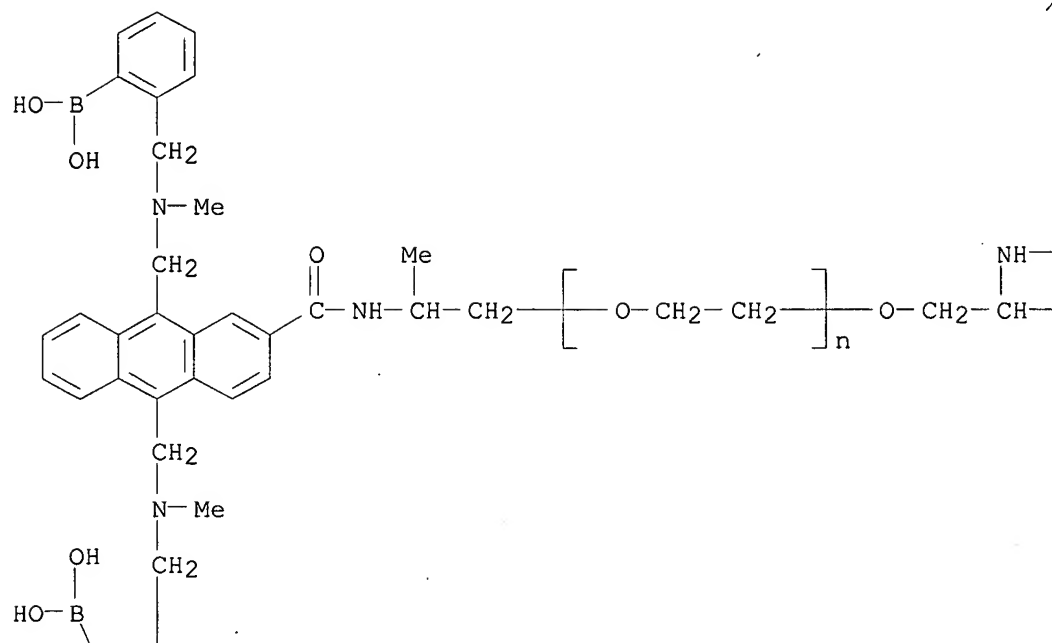
CRN 79-06-1  
CMF C3 H5 N O



RN 873555-12-5 CAPLUS  
CN 2-Propenamide, polymer with  $\alpha$ -[2-[[[9,10-bis[[[(2-boronophenyl)methyl]methylamino]methyl]-2-anthracenyl]carbonyl]amino]propyl]- $\omega$ -[2-[(1-oxo-2-propenyl)amino]propoxy]poly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

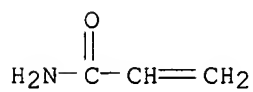
CM 1

CRN 873555-10-3  
CMF (C2 H4 O)<sub>n</sub> C42 H50 B2 N4 O7  
CCI PMS



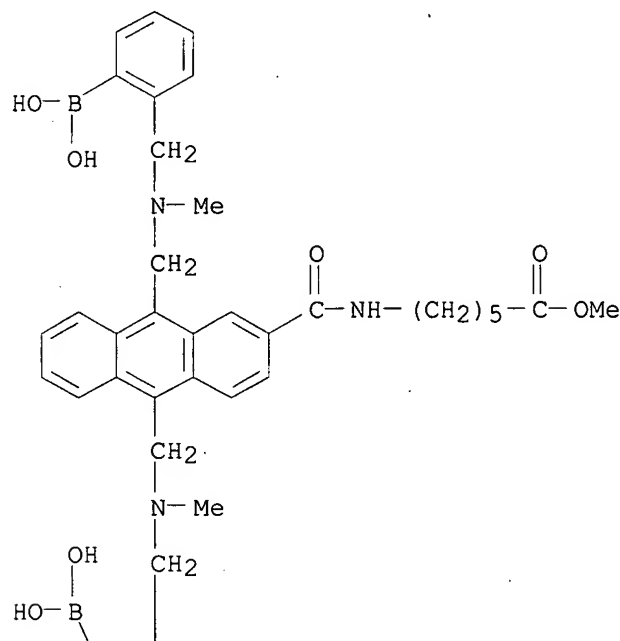
CM 2

CRN 79-06-1  
CMF C3 H5 N O

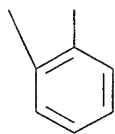


IT 873555-13-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (glucose-measuring fluorescent monomer, glucose-measuring fluorescent  
 sensor polymer substance, and implantable glucose-measuring sensor)  
 RN 873555-13-6 CAPLUS  
 CN Hexanoic acid, 6-[[[9,10-bis[[[(2-boronophenyl)methyl]methylamino]methyl]-  
 2-anthracenyl]carbonyl]amino]-, 1-methyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

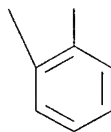
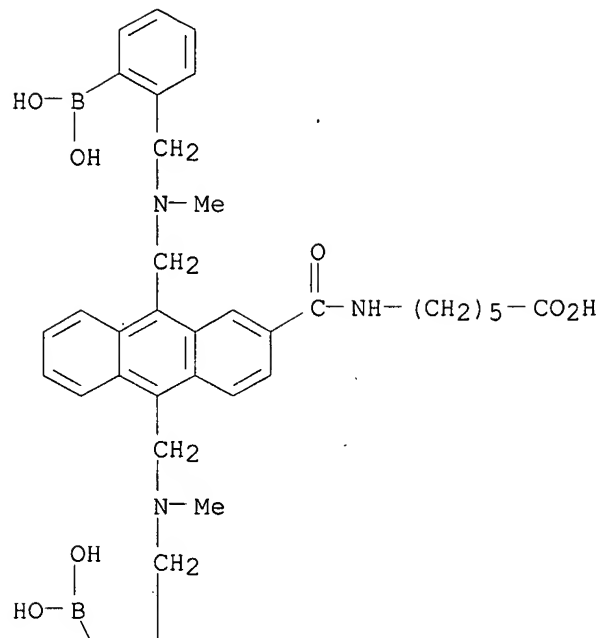


PAGE 2-A



IT 873555-14-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (immobilization on poly(acrylamide) membrane; glucose-measuring  
 fluorescent monomer, glucose-measuring fluorescent sensor polymer  
 substance, and implantable glucose-measuring sensor)  
 RN 873555-14-7 CAPLUS  
 CN Hexanoic acid, 6-[[[9,10-bis[[[(2-boronophenyl)methyl]methylamino]methyl]-  
 2-anthracenyl]carbonyl]amino]- (9CI) (CA INDEX NAME)





REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1114291 CAPLUS

DOCUMENT NUMBER: 145:58663

TITLE: A glucose-sensing contact lens: a new approach to noninvasive continuous physiological glucose monitoring

AUTHOR(S): Badugu, Ramachandram; Lakowicz, Joseph R.; Geddes, Chris D.

CORPORATE SOURCE: Cent. fluorescence Spectroscopy, Dep. Biochem. & Mol. Biol., Univ. of Maryland School of Medicine, MD, 21201, USA

SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2004), 5317(Optical Fibers and Sensors for Medical Applications IV), 234-245  
CODEN: PSISDG; ISSN: 0277-786X

PUBLISHER: SPIE-The International Society for Optical Engineering

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors have developed a new technol. for the non-invasive continuous monitoring of tear glucose using a daily use, disposable contact lens, embedded with sugar-sensing boronic acid containing fluorophores. The authors' findings show that the authors' approach may be suitable for the continuous monitoring of tear glucose levels in the range 50-500  $\mu$ M,

which track blood glucose levels that are typically  $\approx$  5-10-fold higher. The authors initially tested the sensing concept with well-established, previously published, boronic acid probes and the results could conclude the used probes, with higher pKa values, are almost insensitive toward glucose within the contact lens, attributed to the low pH and polarity inside the lens. Subsequently, the authors have developed a range of probes based on the quinolinium backbone, having considerably lower pKa values, which enables them to be suitable to sense the physiol. glucose in the acidic pH contact lens. Herein the authors describe the results based on the authors' findings towards the development of glucose sensing contact lens and therefore an approach to non-invasive continuous monitoring of tear glucose using a contact lens.

IT 162254-07-1, ANDBA

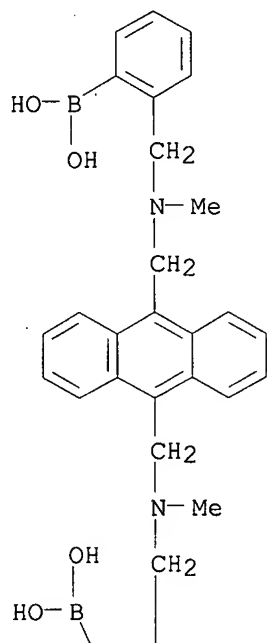
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(noninvasive continuous physiol. glucose monitoring in contact lens)

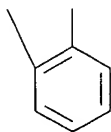
RN 162254-07-1 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



REFERENCE COUNT:

55

THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2005:1078065 CAPLUS

DOCUMENT NUMBER: 143:342217  
 TITLE: Intracorporeal substance measuring assembly and application for measuring blood glucose with a fluorescent indicator  
 INVENTOR(S): Kawanishi, Tetsuro  
 PATENT ASSIGNEE(S): Terumo Kabushiki Kaisha, Japan  
 SOURCE: U.S. Pat. Appl. Publ., 20 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005221277	A1	20051006	US 2005-89329	20050325
JP 2005315871	A	20051110	JP 2005-99024	20050330
PRIORITY APPLN. INFO.:			JP 2004-107653	A 20040331

OTHER SOURCE(S): MARPAT 143:342217

AB An intracorporeal substance measuring assembly to be provided in an embedded-type substance sensor for detecting and measuring an intercorporeal analyte includes: a detection layer containing at least one fluorescent indicator for generating fluorescence according to the concentration

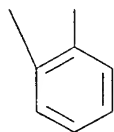
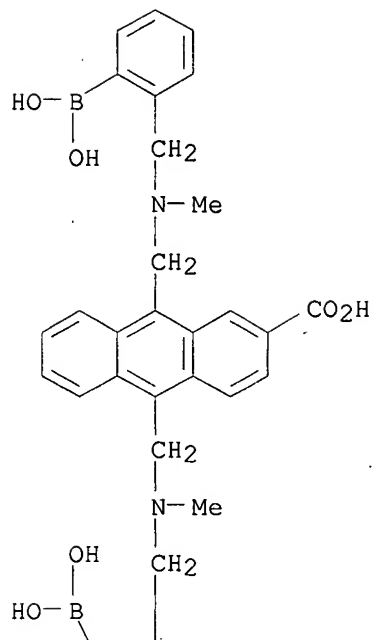
of the analyte; and an optical separation layer which is provided on the detection layer, is optically opaque, permits the analyte to penetrate, and prevents the penetration of at least one of living body substances possibly deteriorating the detection layer and/or obstructing the fluorescence. Thus 9,10-bis[[N-methyl-N-(orthoboronobenzyl)amino]methyl]anthracene-2-carboxylic acid was synthesized and immobilized to a Cuprophane layer in the presence of 1-[3-(dimethylamino)propyl]-3-ethylcarbodiimide and 1-hydroxybenzotriazole. The optical separation layer was formed from dextran, carbon black, and ethylene glycol diglycidyl ether in alkaline solution by crosslinking and polymerization of dextran while introducing the functional groups.

IT 790257-31-7P

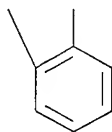
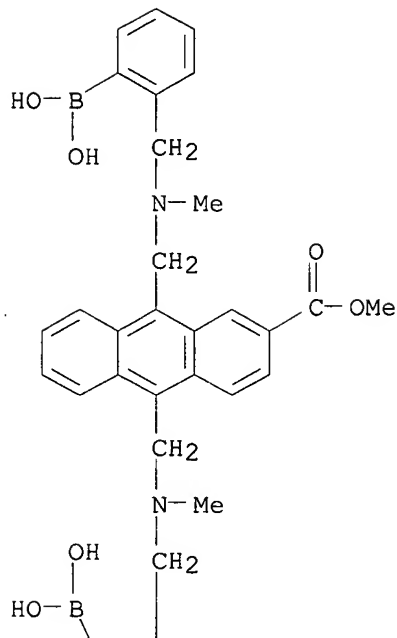
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)  
 (intracorporeal substance measuring assembly and application for measuring blood glucose with a fluorescent indicator)

RN 790257-31-7 CAPLUS

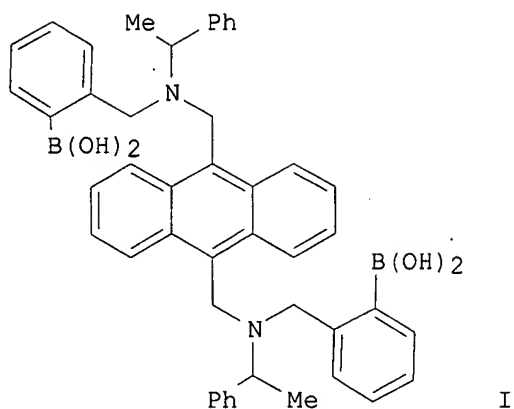
CN 2-Anthracenecarboxylic acid, 9,10-bis[[[(2-boronophenyl)methyl]methylamino]methyl]- (9CI) (CA INDEX NAME)



IT 790257-30-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (intracorporeal substance measuring assembly and application for measuring blood glucose with a fluorescent indicator)  
 RN 790257-30-6 CAPLUS  
 CN 2-Anthracenecarboxylic acid, 9,10-bis[[[(2-boronophenyl)methyl]methylamino]methyl]-, 2-methyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:601949 CAPLUS  
 DOCUMENT NUMBER: 143:286608  
 TITLE: Chemoselective and enantioselective fluorescent recognition of sugar alcohols by a bis-boronic acid receptor  
 AUTHOR(S): Zhao, Jianzhang; James, Tony D.  
 CORPORATE SOURCE: Department of Chemistry, University of Bath, Bath, BA2 7AY, UK  
 SOURCE: Journal of Materials Chemistry (2005), 15(27-28), 2896-2901  
 CODEN: JMACEP; ISSN: 0959-9428  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 143:286608  
 GI



AB Bis-boronic acid I binds strongly and enantioselectively with six-carbon sugar alcs. but does not bind strongly with five- or four-carbon sugar alcs. or monosaccharides.

IT 820975-18-6D, complexes with sugar alcs. 820975-19-7D, complexes with sugar alcs.

RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)

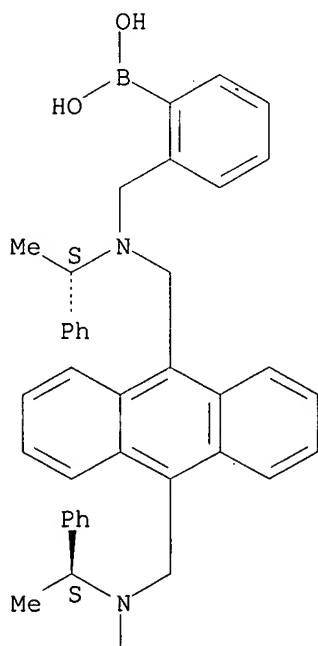
(chemoselective and enantioselective fluorescent recognition of sugar alcs. by bis-boronic acid receptor)

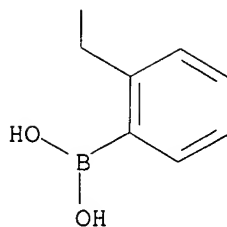
RN 820975-18-6 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene[[(1S)-1-phenylethyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

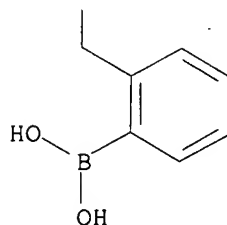
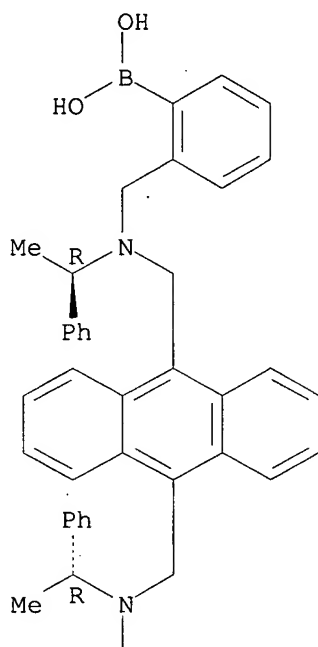
PAGE 1-A





RN 820975-19-7 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[[ (1R)-1-phenylethyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

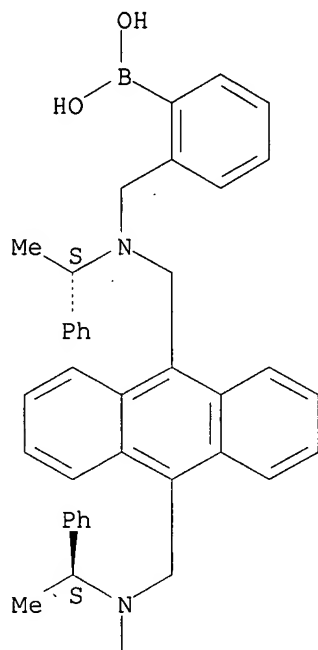


IT 820975-18-6P 820975-19-7P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (chemoselective and enantioselective fluorescent recognition of sugar alcs. by bis-boronic acid receptor)  
 RN 820975-18-6 CAPLUS

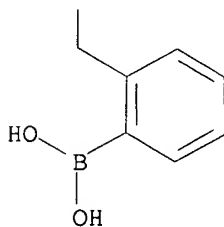
CN Boronic acid, [9,10-anthracenediylbis[methylene[[(1S)-1-phenylethyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

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PAGE 2-A

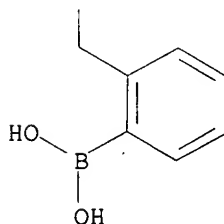
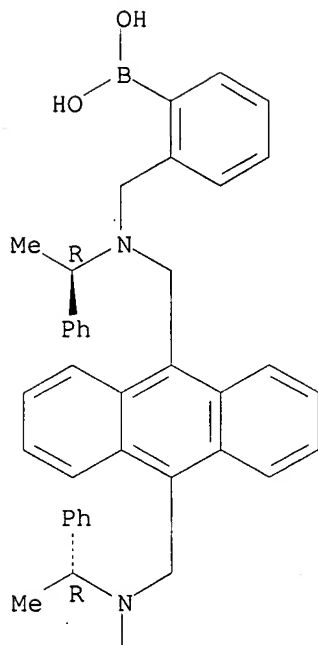


RN 820975-19-7 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene[[(1R)-1-phenylethyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).





REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:360763 CAPLUS

DOCUMENT NUMBER: 143:70596

TITLE: A sorbitol-selective fluorescence sensor

AUTHOR(S): Swamy, K. M. K.; Jang, Yun Jung; Park, Min Sun; Koh, Hwa Soo; Lee, Sang Kil; Yoon, Yeo Joon; Yoon, Juyoung  
 CORPORATE SOURCE: Department of Chemistry and Division of Nano Sciences, Ewha Womans University, 11-1 Daehyun-Dong, Seodaemun-Ku, Seoul, 120-750, S. Korea

SOURCE: Tetrahedron Letters (2005), 46(20), 3453-3456  
 CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 143:70596

AB A new anthracene derivative bearing two phenylboronic acid groups at the 1,8-positions was prepared and its binding properties towards sorbitol, xylitol, fructose, glucose and galactose were studied using fluorescence anal.

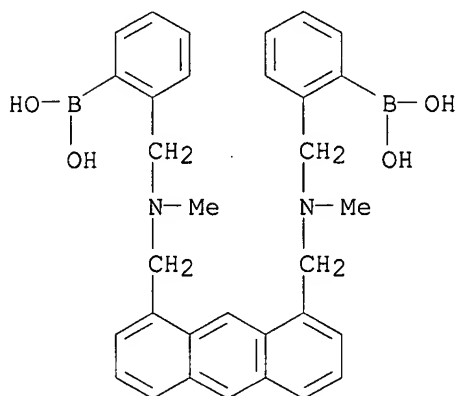
IT 854718-95-9P

RL: ARU (Analytical role, unclassified); DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(sorbitol-selective fluorescence sensor using anthracene derivative bearing two phenylboronic acid groups)

RN 854718-95-9 CAPLUS

CN Boronic acid, [1,8-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:283647 CAPLUS

DOCUMENT NUMBER: 142:340779

TITLE: Cyanide-sensing compounds and uses thereof

INVENTOR(S): Geddes, Chris D.; Badugu, Ramachandram; Lakowitz, Joseph R.

PATENT ASSIGNEE(S): University of Maryland Biotechnology Institute, USA

SOURCE: PCT Int. Appl., 71 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005029033	A2	20050331	WO 2004-US30066	20040916
WO 2005029033	A3	20050804		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1671118	A2	20060621	EP 2004-788753	20040916
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

PRIORITY APPLN. INFO.: US 2003-503689P P 20030917  
WO 2004-US30066 W 20040916

AB The present invention relates to a cyanide detection method using

fluorescence and cyanide sensitive boronic acid containing fluorophores, wherein a change in a measured fluorescent property correlates to the concentration of the cyanide compound in a biol. or environmental test sample.

IT 162254-07-1P

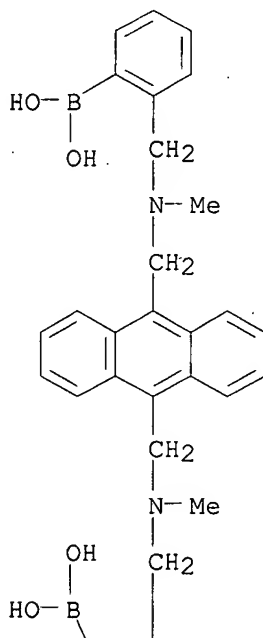
RL: ARU (Analytical role, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)

(fluorophore; cyanide detection method using fluorescence and cyanide sensitive boronic acid containing fluorophores)

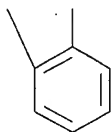
RN 162254-07-1 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



L4 ANSWER 8 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:267931 CAPLUS

DOCUMENT NUMBER: 143:18911

TITLE: Enhanced fluorescence and chiral discrimination for tartaric acid in a dual fluorophore boronic acid receptor

AUTHOR(S): Zhao, Jianzhang; James, Tony D.

CORPORATE SOURCE: Department of Chemistry, University of Bath, Bath, BA2 7AY, UK

SOURCE: Chemical Communications (Cambridge, United Kingdom) (2005), (14), 1889-1891

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The addition of D-tartaric acid to (R,R)-9,10-bis[N-(2-boronophenylmethyl)-N-(2-(2-naphthylethyl))amino]anthracene (I) causes a large increase in fluorescence. While addition of L-tartaric acid to I only produces small changes in fluorescence.

IT 852106-20-8

RL: ARU (Analytical role, unclassified); NUU (Other use, unclassified);

PRP (Properties); ANST (Analytical study); USES (Uses)

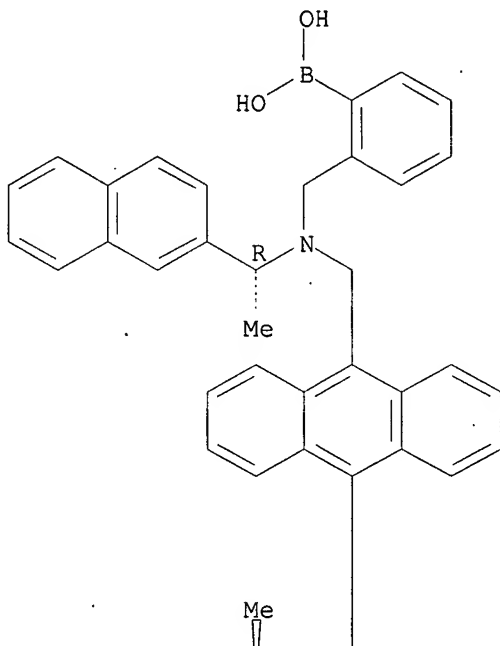
(enhanced fluorescence and chiral discrimination for tartaric acid in a dual fluorophore boronic acid receptor)

RN 852106-20-8 CAPLUS

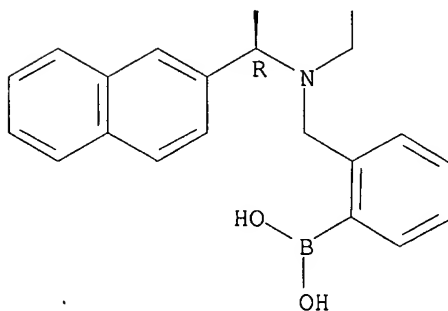
CN Boronic acid, [9,10-anthracenediylbis[methylene[[ (1R)-1-(2-naphthalenyl)ethyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

PAGE 1-A



PAGE 2-A



IT 852106-21-9

RL: ARU (Analytical role, unclassified); PRP (Properties); ANST  
(Analytical study)

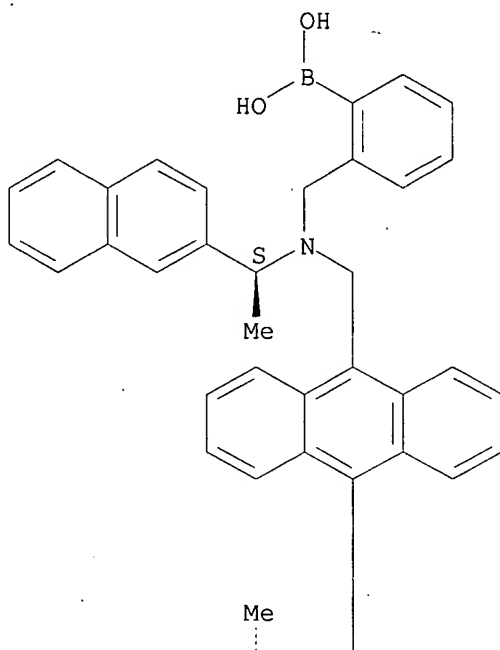
(enhanced fluorescence and chiral discrimination for tartaric acid in a  
dual fluorophore boronic acid receptor)

RN 852106-21-9 CAPLUS

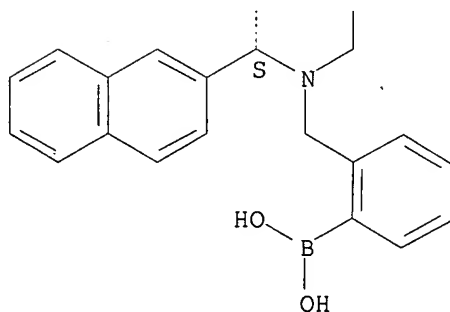
CN Boronic acid, [9,10-anthracenediylbis[methylene[[(1S)-1-(2-  
naphthalenyl)ethyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX  
NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-A



PAGE 2-A



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

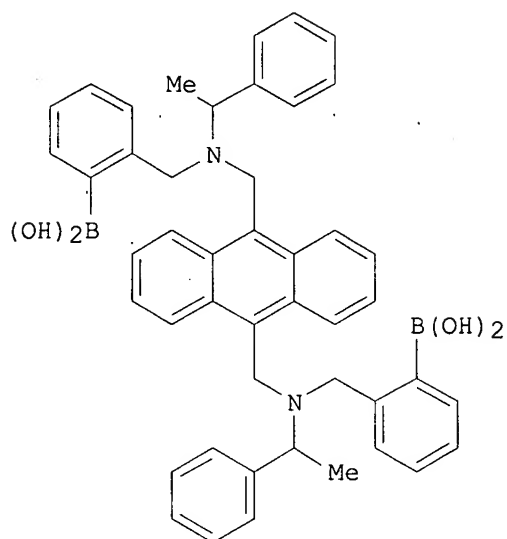
ACCESSION NUMBER: 2004:973474 CAPLUS

DOCUMENT NUMBER: 142:126130

TITLE: An enantioselective fluorescent sensor for sugar acids

AUTHOR(S): Zhao, Jianzhang; Davidson, Matthew G.; Mahon, Mary F.;  
Kociok-Koehn, Gabriele; James, Tony D.

CORPORATE SOURCE: Department of Chemistry and Bath Chemical  
 Crystallography, University of Bath, Bath, BA2 7AY, UK  
 SOURCE: Journal of the American Chemical Society (2004),  
 126(49), 16179-16186  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 142:126130  
 GI



AB Chiral fluorescent boronic acid, (R,R)-I or (S,S)-I, is a highly enantioselective, chemoselective, and sensitive sensor for sugar acids, such as tartaric acid. Enantioselectivities (KR/KS) of up to 550:1, chemoselectivity up to 11,000:1, and sensitivities in the micromolar range with sensor I were observed. Single-crystal x-ray anal. was used to confirm the structure of the fluorescent species.

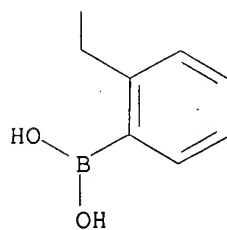
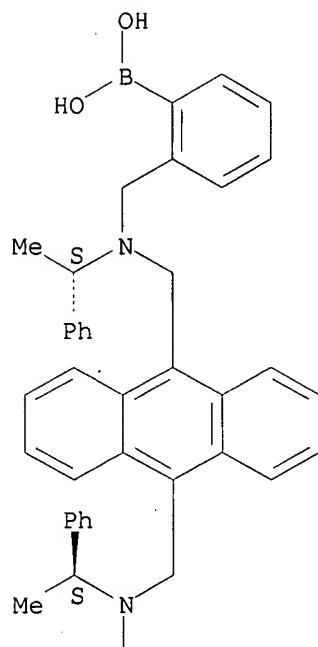
IT 820975-18-6P 820975-19-7P  
 RL: ARU (Analytical role, unclassified); DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(enantioselective fluorescent sensor based on chiral boronic acid derivative for sugar acid anal.)

RN 820975-18-6 CAPLUS

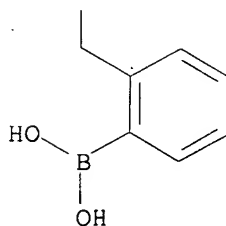
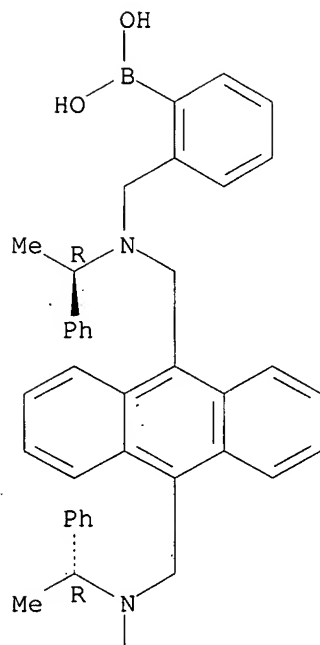
CN Boronic acid, [9,10-anthracenediylbis[methylene[[(1S)-1-phenylethyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation ·(+).



RN 820975-19-7 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[[1R]-1-phenylethyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

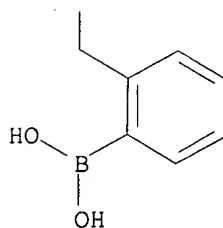
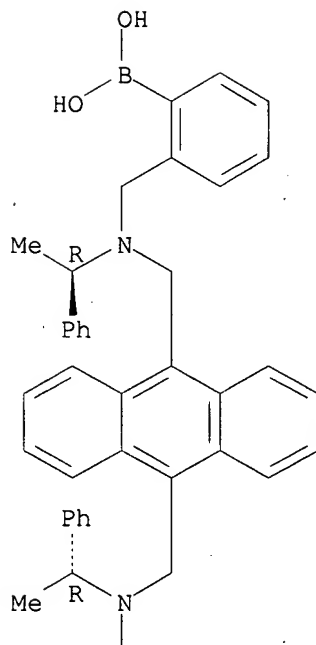
Absolute stereochemistry. Rotation (-).



IT 820975-28-8  
 RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)  
 (formation and crystal structure of)  
 RN 820975-28-8 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[[(1R)-1-phenylethyl]imino]methylene-2,1-phenylene]]bis-, compd. with dichloromethane (4:1) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 820975-19-7  
 CMF C46 H46 B2 N2 O4

Absolute stereochemistry. Rotation (-).





CM 2

CRN 75-09-2  
CMF C H2 C12

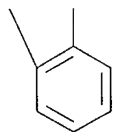
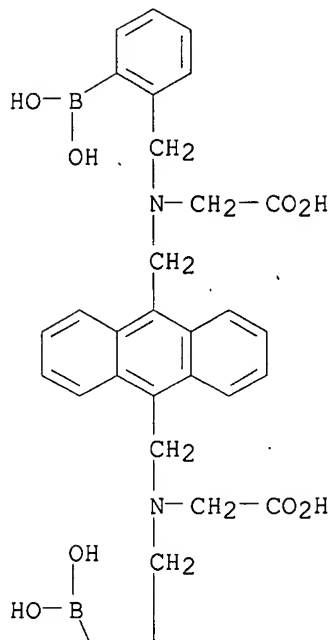
C1-CH<sub>2</sub>-C1

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2004:965261 CAPLUS  
 DOCUMENT NUMBER: 141:391546  
 TITLE: Solid-phase saccharide sensing compounds  
 INVENTOR(S): Kawanishi, Tetsuro; Romey, Matthew Albert; Holody, Mark Z.; Zhu, Peter C.; Shinkai, Seiji  
 PATENT ASSIGNEE(S): Terumo Corporation of Japan, Japan  
 SOURCE: PCT Int. Appl., 48 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

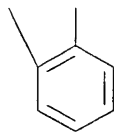
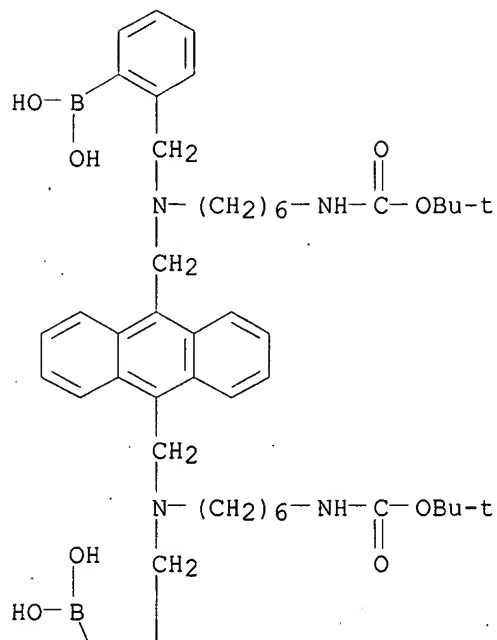
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096817	A1	20041111	WO 2003-US9380	20030328
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003220547	A1	20041123	AU 2003-220547	20030328
EP 1608665	A1	20051228	EP 2003-716860	20030328
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1720250	A	20060111	CN 2003-825758	20030328
JP 2006514680	T	20060511	JP 2004-571385	20030328
US 2006223189	A1	20061005	US 2005-551032	20050927
PRIORITY APPLN. INFO.:			WO 2003-US9380	A 20030328
AB	The present invention provides solid-phase saccharide dyes. The dyes are bisboronic acids covalently bonded to a solid substrate. The dyes selectively conjugate with saccharides, particularly glucose, and register a signal. The signal is proportional to the quantity of saccharide. Thus, the dyes of the present invention are useful for measuring and monitoring saccharide levels, particularly in biol. fluids such as blood.			
IT	790257-28-2P RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation) (solid-phase saccharide sensing compds.)			
RN	790257-28-2 CAPLUS			
CN	Glycine, N,N'-[9,10-anthracenediylbis(methylene)]bis[N-[(2-boronophenyl)methyl]- (9CI) (CA INDEX NAME)			



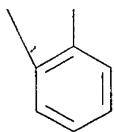
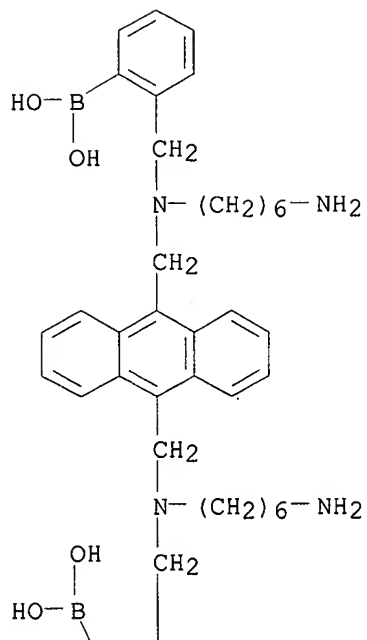
IT 790257-24-8P 790257-25-9P 790257-30-6P  
 790257-31-7P 790257-32-8DP, conjugated to Cuprophan or  
 Biodyne A 790257-35-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (solid-phase saccharide sensing compds.)

RN 790257-24-8 CAPLUS

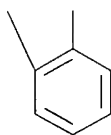
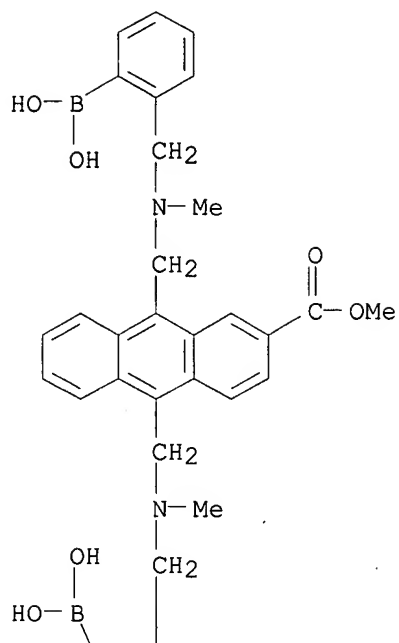
CN Carbamic acid, [9,10-anthracenediylbis[methylene[[2-boronophenyl)methyl]imino]-6,1-hexanediyl]]bis-, C,C-bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



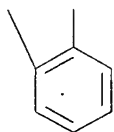
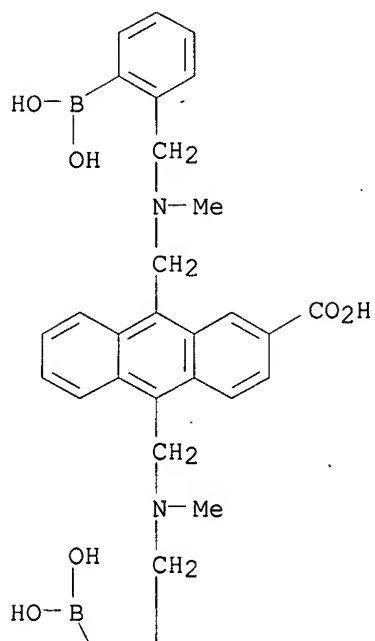
RN 790257-25-9 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[(6-aminohexyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



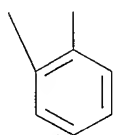
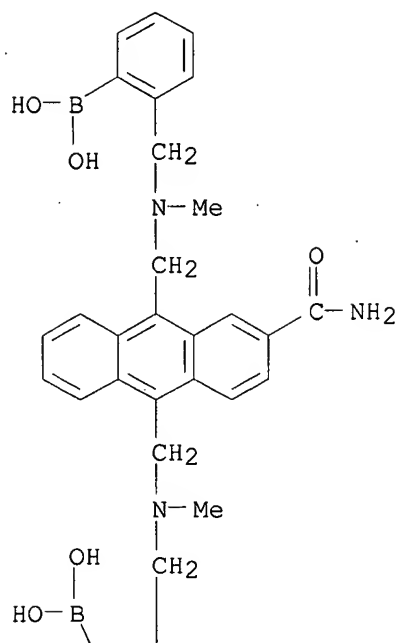
RN 790257-30-6 CAPLUS  
 CN 2-Anthracenecarboxylic acid, 9,10-bis[[[(2-boronophenyl)methyl]methylamino]methyl]-, 2-methyl ester (9CI) (CA INDEX NAME)



RN 790257-31-7 CAPLUS  
 CN 2-Anthracenecarboxylic acid, 9,10-bis[[(2-boronophenyl)methyl]methylamino  
 ]methyl]- (9CI) (CA INDEX NAME)

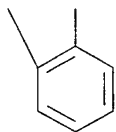
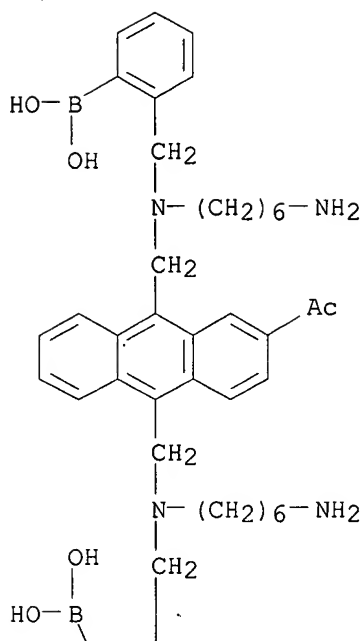


RN 790257-32-8 CAPLUS  
 CN Boronic acid, [[2-(aminocarbonyl)-9,10-anthracenediyl]bis[methylene(methyl imino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



RN 790257-35-1 CAPLUS  
 CN Boronic acid, [(2-acetyl-9,10-anthracenediyl)bis[methylene[(6-aminohexyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)





REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT.

L4 ANSWER 11 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:697535 CAPLUS

DOCUMENT NUMBER: 142:388369

TITLE: A Study of Boronic Acid Based Fluorescent Glucose Sensors

AUTHOR(S): Kawanishi, T.; Romey, M. A.; Zhu, P. C.; Holody, M. Z.; Shinkai, S.

CORPORATE SOURCE: Terumo Cardiovascular Systems Co., Tustin, CA, USA

SOURCE: Journal of Fluorescence (2004), 14(5), 499-512

CODEN: JOFLEN; ISSN: 1053-0509

PUBLISHER: Kluwer Academic/Plenum Publishers

DOCUMENT TYPE: Journal

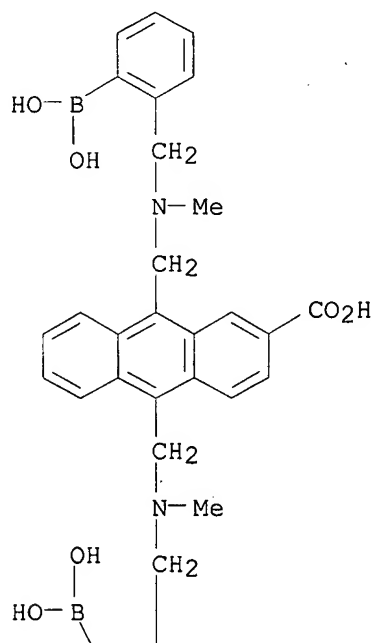
LANGUAGE: English

AB Boronic acid based anthracene dyes were designed, synthesized, and immobilized to solid phase, creating a continuous glucose sensor. Glucose sensitivities of dyes can decrease drastically after immobilization, therefore how to immobilize a dye to solid phase without changing the dye property is a key issue in developing the sensor. The glucose sensitivity of the simplest 1st generation sensor, which is based on an immobilized mono-phenylboronate/single-arm type, came short of the sensitivity requirement for practical use, because of the very moderate fluorescence intensity change over the physiol. glucose range. However, the 2nd generation, an immobilized bis-phenylboronate/double-arm type sensor,

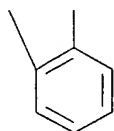
which contained two boronate groups in the dye moiety in expectation of a large intensity change, brought about considerable improvement on its glucose sensitivity. The authors tried to introduce functional groups onto an anthracene ring to improve the dyes' fluorescence properties. Acetyl or carboxyl substitution on anthracene contributed to shift the fluorescence wavelength into the more visible range (red-shift) and a divergence of wavelength between an excitation peak and an emission peak. This improvement is advantageous to the design of an optical detection system. Furthermore, single arm immobilization to this carboxyl group, thus linking directly to the fluorophore led to a 3rd generation sensor, an immobilized bis-phenylboronate/single-arm type, that was twice as sensitive as that of the 2nd generation sensor, presumably due to increased mobility of the dye moiety. The results of the authors' study advance closer toward a clin. useful continuous fluorescent glucose sensor.

IT 790257-31-7DP, reaction products with cellulose derivs.  
 790257-35-1DP, reaction products with cellulose derivs.  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (boronic acid-based fluorescent glucose sensors)  
 RN 790257-31-7 CAPLUS  
 CN 2-Anthracenecarboxylic acid, 9,10-bis[[(2-boronophenyl)methyl]methylamino]methyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

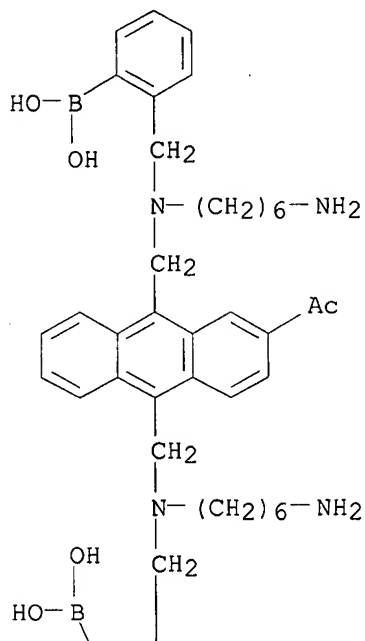


PAGE 2-A

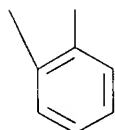


RN 790257-35-1 CAPLUS  
 CN Boronic acid, [(2-acetyl-9,10-anthracenediyl)bis[methylene[(6-aminohexyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

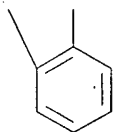
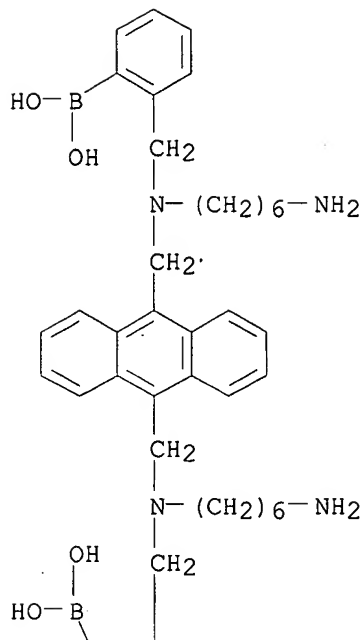
PAGE 1-A



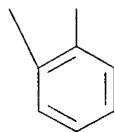
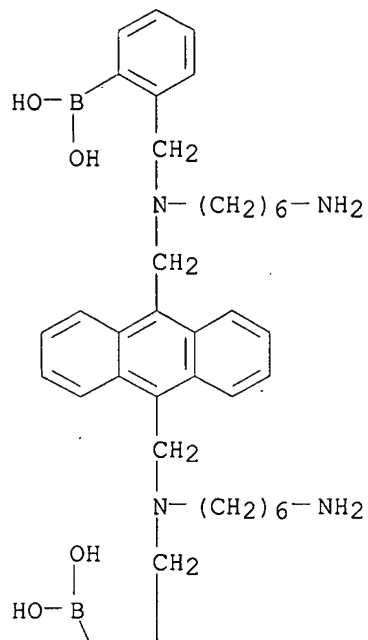
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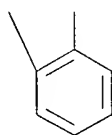
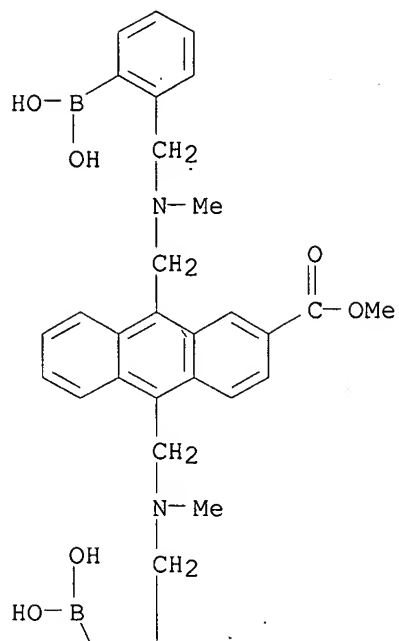
IT 790257-25-9DP, reaction products with cellulose derivs.  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (boronic acid-based fluorescent glucose sensors)  
 RN 790257-25-9 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[(6-aminohexyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



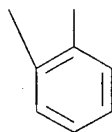
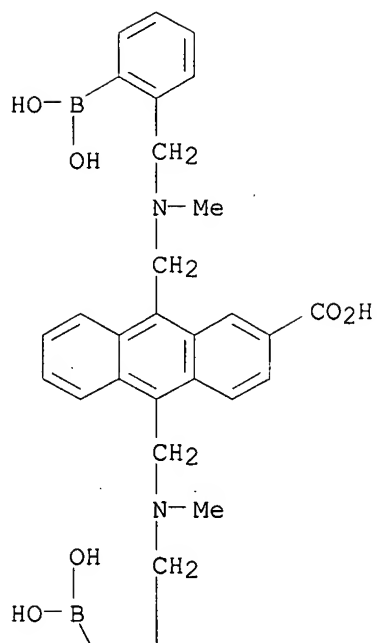
IT 790257-25-9P 790257-30-6P 790257-31-7P  
 790257-35-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (boronic acid-based fluorescent glucose sensors)  
 RN 790257-25-9 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[(6-  
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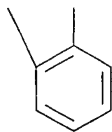
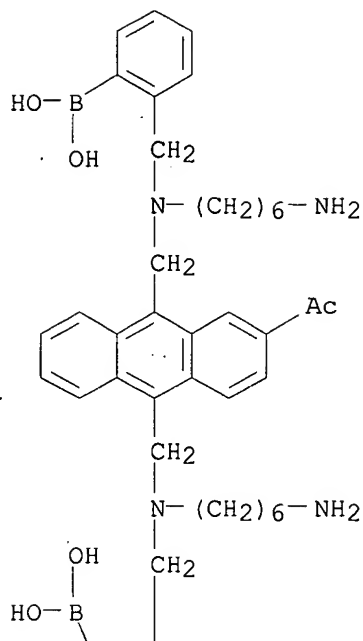
RN 790257-30-6 CAPLUS  
 CN 2-Anthracenecarboxylic acid, 9,10-bis[[[(2-boronophenyl)methyl]methylamino]methyl]-, 2-methyl ester (9CI) (CA INDEX NAME)



RN 790257-31-7 CAPLUS  
 CN 2-Anthracenecarboxylic acid, 9,10-bis[[(2-boronophenyl)methyl]methylamino  
 ]methyl]- (9CI) (CA INDEX NAME)



RN 790257-35-1 CAPLUS  
 CN Boronic acid, [(2-acetyl-9,10-anthracenediyl)bis[methylene[(6-aminohexyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:621102 CAPLUS

DOCUMENT NUMBER: 142:234524

TITLE: Cyanide-sensitive fluorescent probes

AUTHOR(S): Badugu, Ramachandram; Lakowicz, Joseph R.; Geddes, Chris D.

CORPORATE SOURCE: Center for Fluorescence Spectroscopy, Department of Biochemistry and Molecular Biology, Medical Biotechnology Center, University of Maryland School of Medicine, Baltimore, MD, 21201, USA

SOURCE: Dyes and Pigments (2005), 64(1), 49-55

CODEN: DYPIDX; ISSN: 0143-7208

PUBLISHER: Elsevier Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We characterize the response of several boronic acid containing fluorophores, which are widely used for sugar determination, towards aqueous cyanide. In two recent

reports we have shown that boronic acid containing fluorophores can be used to sense aqueous cyanide through physiolog. safeguard levels. In this report we show that our new sensing mechanism is not just specific to our recently reported probes, but is indeed generic to the boronic acid moiety itself. Subsequently a wide range of cyanide-sensitive probes can now be realized,



offering several modalities for fluorescence based cyanide sensing such as: intensity, lifetime, ratiometric, polarization and modulation fluorescence sensing.

IT 162254-07-1, ANDBA

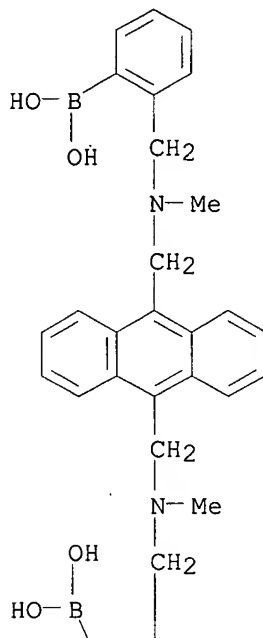
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)

(cyanide sensing by boronic acid-containing fluorescent probes)

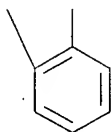
RN 162254-07-1 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

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REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:372944 CAPLUS

DOCUMENT NUMBER: 140:367866

TITLE: Fluorescent probes for saccharides

INVENTOR(S): Lakowicz, Joseph R.; Dicesare, Nicolas

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 50 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004087842	A1	20040506	US 2003-448430	20030530
US 2005158245	A1	20050721	US 2005-75817	20050310
PRIORITY APPLN. INFO.:			US 2002-383799P	P 20020530
			US 2003-448430	B1 20030530

OTHER SOURCE(S): MARPAT 140:367866

AB The spectroscopic and photophys. properties of fluorescent probes comprising donor-acceptor derivs. comprising the boric acid group or a derivative of boric acid, B(OH)<sub>3</sub> (or borate ion, BO(OH)<sub>2</sub><sup>-</sup>), arsenious acid, H<sub>3</sub>AsO<sub>3</sub> (or arsenite ion, H<sub>2</sub>AsO<sub>3</sub><sup>-</sup>), telluric acid, H<sub>6</sub>TeO<sub>6</sub> (or tellurate ion, H<sub>5</sub>TeO<sub>6</sub><sup>-</sup>) or germanic acid, Ge(OH)<sub>6</sub> (or germanate ion, GeO(OH)<sub>3</sub><sup>-</sup>) are described. Method of using said probes are also provided.

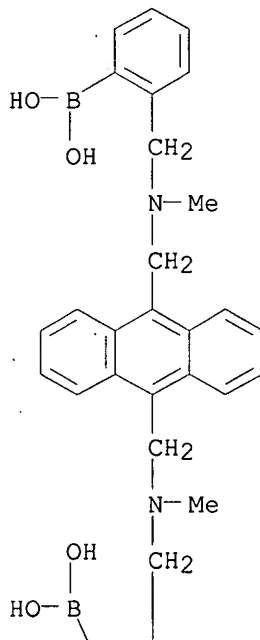
IT 162254-07-1

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (saccharides determination by fluorometry with boric acid, arsenious acid, telluric acid or germanic acid fluorescent indicators)

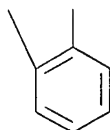
RN 162254-07-1 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



ACCESSION NUMBER: 2004:58517 CAPLUS  
 DOCUMENT NUMBER: 140:271084  
 TITLE: Modular solid-phase synthetic approach to optimize structural and electronic properties of oligo-boronic acid receptors and sensors for the aqueous recognition of oligosaccharides  
 AUTHOR(S): Stones, Duane; Manku, Sukhdev; Lu, Xiaosong; Hall, Dennis G.  
 CORPORATE SOURCE: Department of Chemistry, Gunning-Lemieux Chemistry Centre, University of Alberta, Edmonton, AB, T6G 2G2, Can.  
 SOURCE: Chemistry--A European Journal (2004), 10(1), 92-100  
 CODEN: CEUJED; ISSN: 0947-6539  
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 140:271084

AB This article describes the design and optimization of the first entirely modular, parallel solid-phase synthetic approach for the generation of well-defined polyamine oligo-boronic acid receptors and fluorescence sensors for complex oligosaccharides. The synthetic approach allows an effective building of the receptor polyamine backbone, followed by the controlled diversification of the amine benzylic side chains. This approach enabled the testing, in a modular fashion, of the effect of different aryl-boronic acid units substituted with un-encumbering para electron-withdrawing or electron-donating groups. The feasibility of this approach toward automated synthesis was also investigated with the assembly of a sub-library of receptors by means of the Irori MiniKan technol. Several sub-libraries of anthracene-capped sensors containing two or three aryl-boronic acids were synthesized, and their binding to a series of model disaccharides was examined in neutral aqueous media. The calcn. of association consts. by fluorescence titrns. confirmed that subtle changes in the structures of the inter-amine spacers in the polyamine backbone can have a significant effect on the stability of the resulting complexes. Most importantly, this study led to the determination of the preferred electronic

characteristics for the aryl-boronate units, and suggests that a new generation of receptors containing very electron-poor aryl-boronic acids could lead to a significant improvement of binding affinities.

IT 673455-64-6P 673455-66-8P 673455-68-0P  
 673455-70-4P 673455-72-6P 673455-74-8P  
 673455-76-0P 673455-78-2P 673455-82-8P  
 673455-84-0P 673455-86-2P 673455-88-4P  
 673455-92-0P 673455-94-2P 673455-96-4P  
 673455-98-6P 673456-00-3P 673456-01-4P  
 673456-02-5P 673456-03-6P 673456-04-7P  
 673456-05-8P 673456-06-9P 673456-07-0P  
 673456-08-1P 673456-09-2P 673456-10-5P  
 673456-11-6P 673456-12-7P 673456-13-8P  
 673456-14-9P

RL: CPN (Combinatorial preparation); CMBI (Combinatorial study); PREP (Preparation)

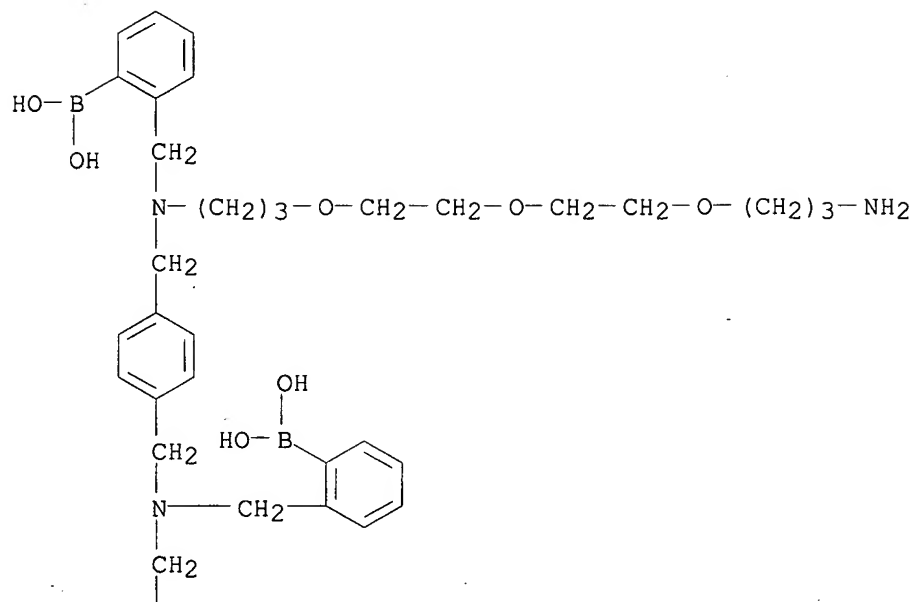
(modular solid phase synthetic approach to optimize structural and electronic properties of oligo-boronic acid receptors and sensors for aqueous recognition of oligosaccharides)

RN 673455-64-6 CAPLUS

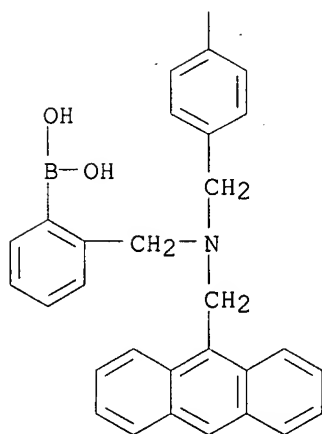
CN D-Fructose, 4-O- $\beta$ -D-galactopyranosyl-, compd. with [2-[15-amino-2-[[4-[[[4-[[[9-anthracenylmethyl][(2-boronophenyl)methyl]amino)methyl]phenyl)methyl][(2-boronophenyl)methyl]amino)methyl]phenyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CRN 673455-63-5  
 CMF C62 H73 B3 N4 O9

PAGE 1-A



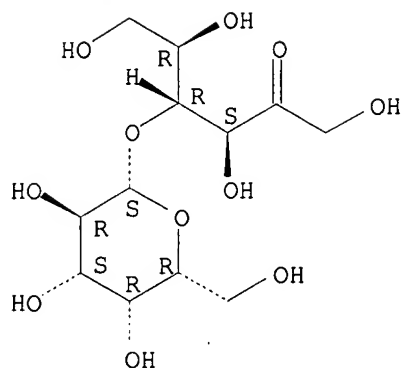
PAGE 2-A



CM 2

CRN 4618-18-2  
 CMF C12 H22 O11

Absolute stereochemistry.

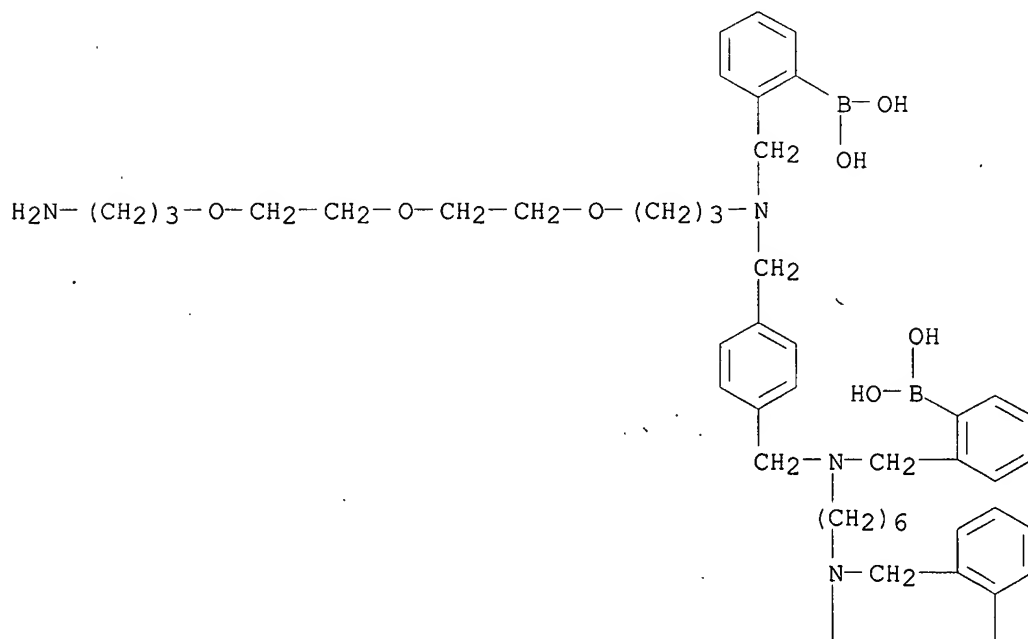


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 (CA INDEX NAME)

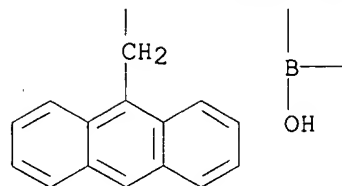
CM 1

CRN 673455-65-7  
 CMF C60 H77 B3 N4 O9

PAGE 1-A



PAGE 2-A



PAGE 2-B

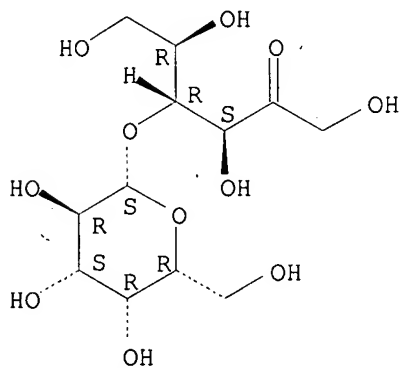
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CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



RN 673455-68-0 CAPLUS

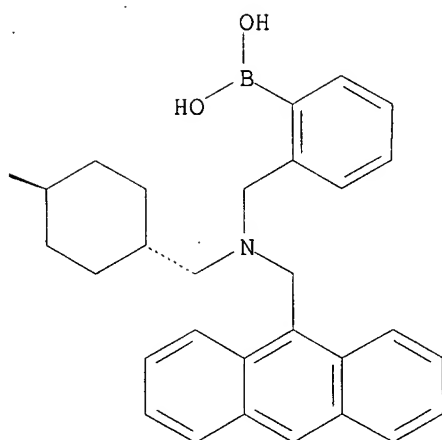
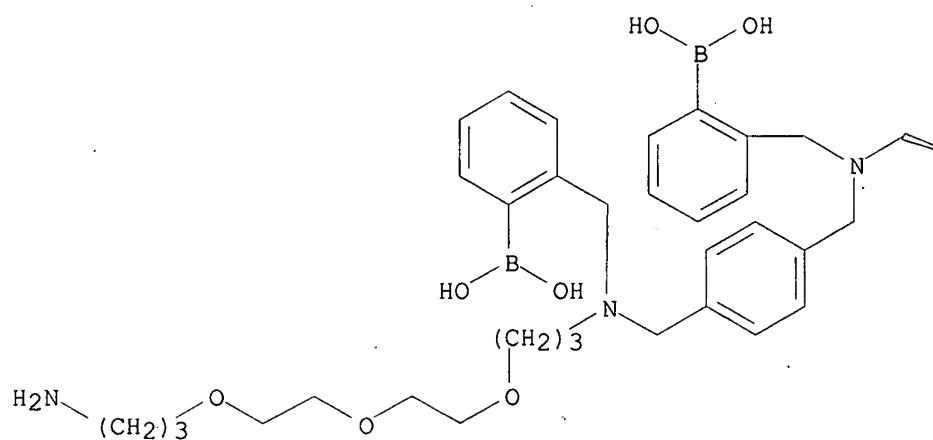
CN D-Fructose, 4-O- $\beta$ -D-galactopyranosyl-, compd. with  
[2-[15-amino-2-[[4-[[[trans-4-[[[9-anthracenylmethyl][(2-boronophenyl)methyl]amino)methyl]cyclohexyl)methyl][(2-boronophenyl)methyl]amino)methyl]phenyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 673455-67-9

CMF C62 H79 B3 N4 O9

Relative stereochemistry.

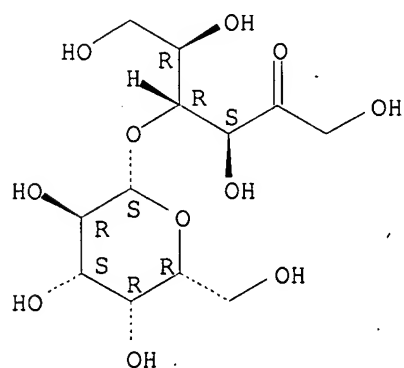


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



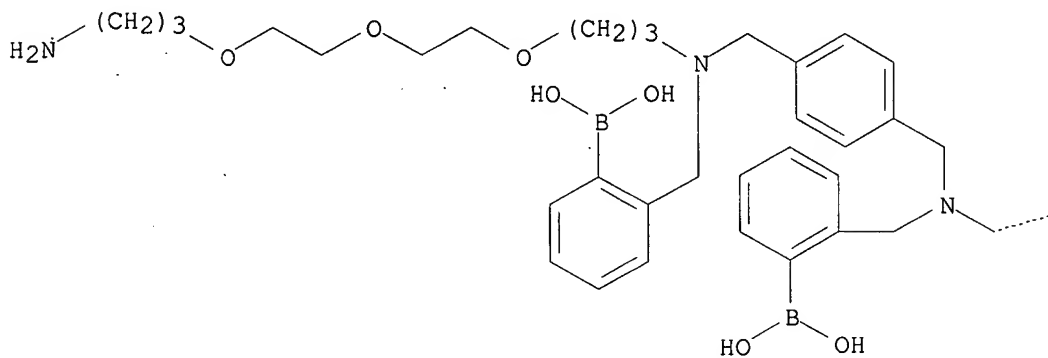
RN 673455-70-4 CAPLUS  
 CN D-Fructose, 4-O-β-D-galactopyranosyl-, compd. with  
 [2-[15-amino-2-[[4-[[[trans-4-[(9-anthracenylmethyl)[(2-  
 boronophenyl)methyl]amino]cyclohexyl)methyl][(2-  
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 azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

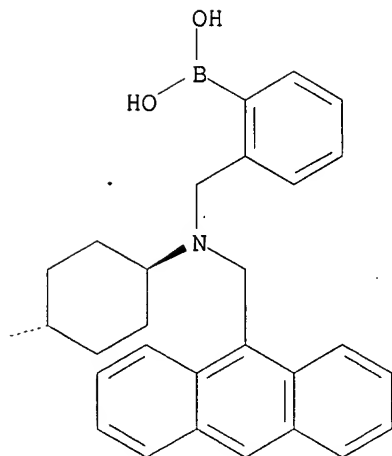
CRN 673455-69-1  
 CMF C61 H77 B3 N4 O9

Relative stereochemistry.

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PAGE 1-B

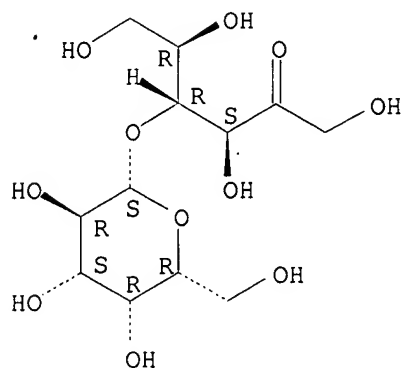


CM 2

CRN 4618-18-2  
 CMF C12 H22 O11



Absolute stereochemistry.

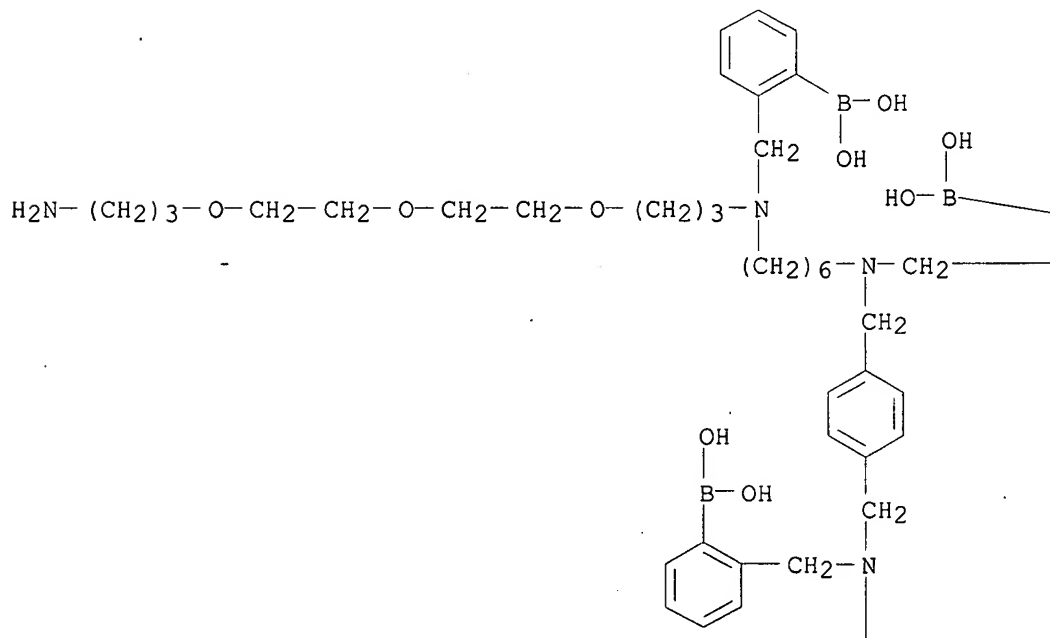


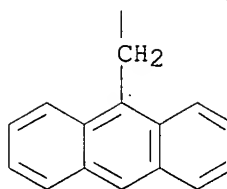
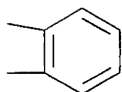
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 yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 673455-71-5  
 CMF C60 H77 B3 N4 O9

PAGE 1-A

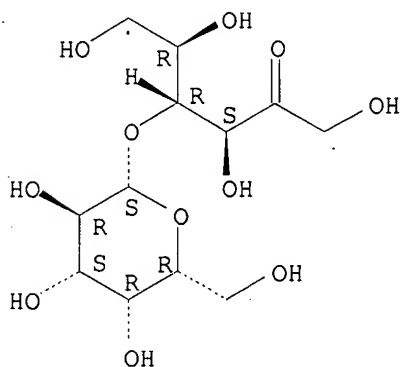




CM 2

CRN 4618-18-2  
CMF C12 H22 O11

Absolute stereochemistry.



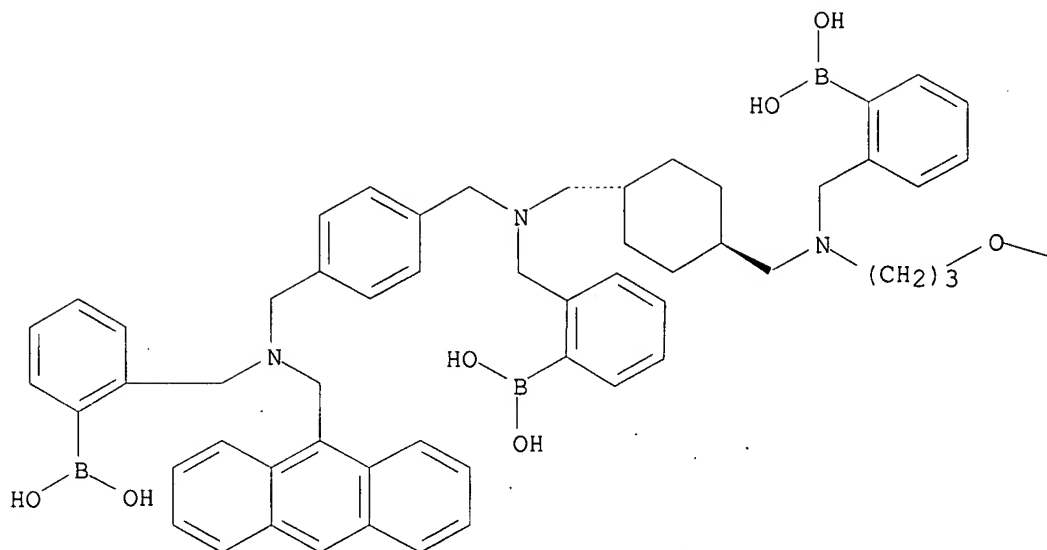
RN 673455-74-8 CAPLUS  
CN D-Fructose, 4-O-β-D-galactopyranosyl-, compd. with  
[2-[15-amino-2-[[trans-4-[[[4-[[[9-anthracenylmethyl][(2'-  
boronophenyl)methyl]amino]methyl]phenyl]methyl][(2-  
boronophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

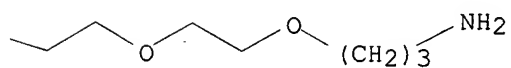
CRN 673455-73-7  
CMF C62 H79 B3 N4 O9

Relative stereochemistry.

PAGE 1-A



PAGE 1-B

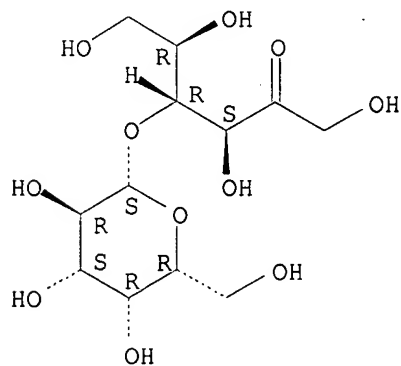


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



RN 673455-76-0 CAPLUS

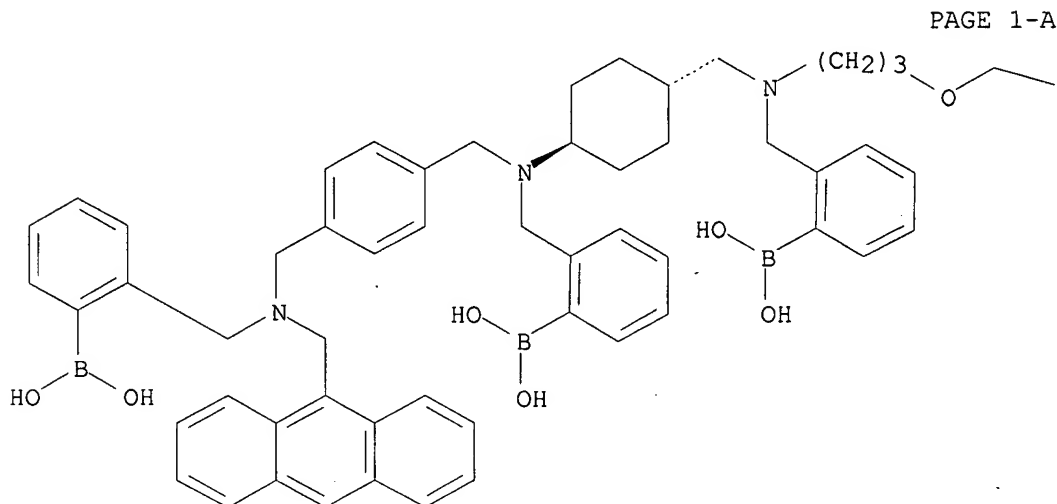
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 boronophenyl)methyl]amino]cyclohexyl)methyl]-6,9,12-trioxa-2-azapentadec-1-  
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CM 1

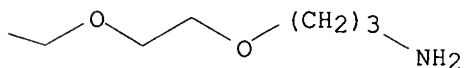
CRN 673455-75-9

CMF C61 H77 B3 N4 O9

Relative stereochemistry.



PAGE 1-B

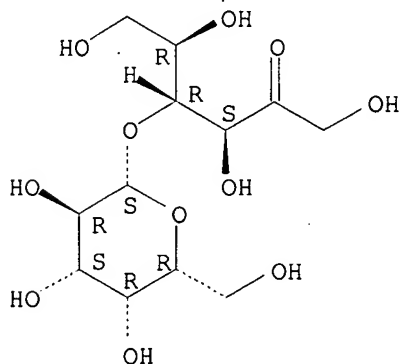


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



RN 673455-78-2 CAPLUS

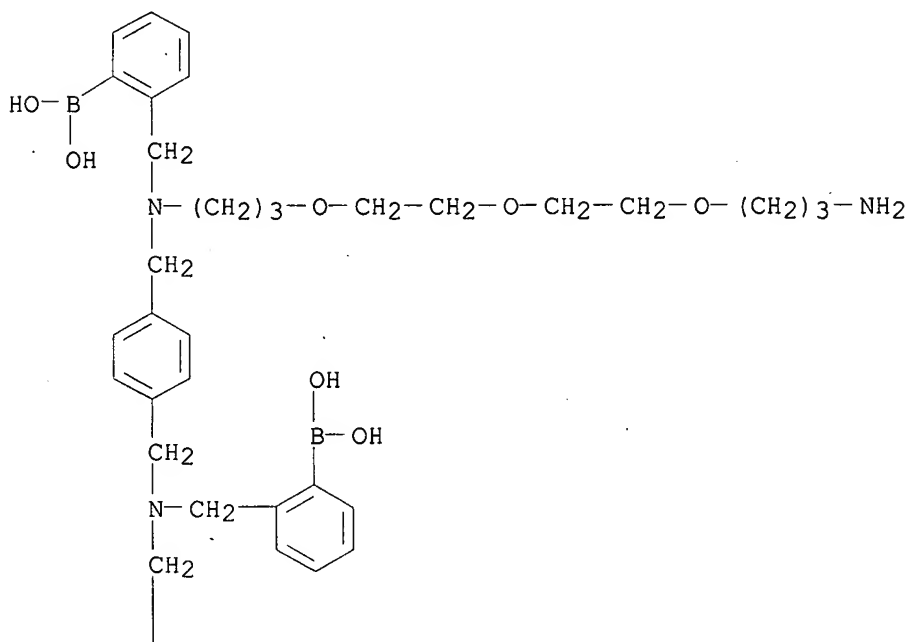
CN D-Fructose, 4-O-β-D-galactopyranosyl-, compd. with  
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CM 1

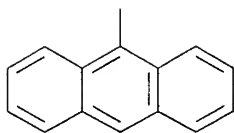
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CMF C47 H57 B2 N3 O7

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PAGE 2-A

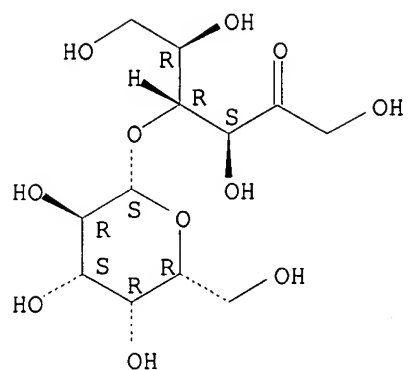


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



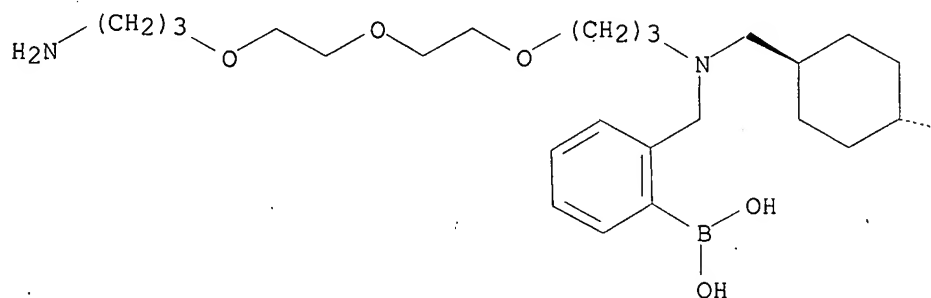
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 CN D-Fructose, 4-O-β-D-galactopyranosyl-, compd. with  
 [2-[15-amino-2-[[trans-4-[[[9-anthracenylmethyl][(2-  
 boronophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
 azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

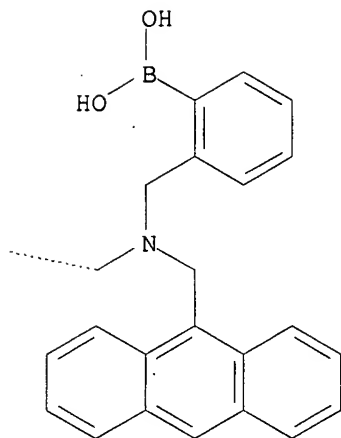
CM 1

CRN 673455-81-7  
 CMF C47 H63 B2 N3 O7

Relative stereochemistry.

PAGE 1-A



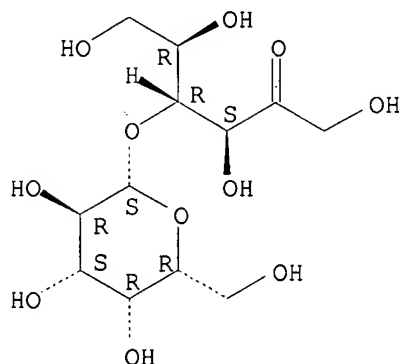


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



RN 673455-84-0 CAPLUS

CN D-Fructose, 4-O-β-D-galactopyranosyl-, compd. with  
[2-[15-amino-2-[[trans-4-[[[9-anthracenylmethyl][(2-borono-5-methoxyphenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]-4-methoxyphenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

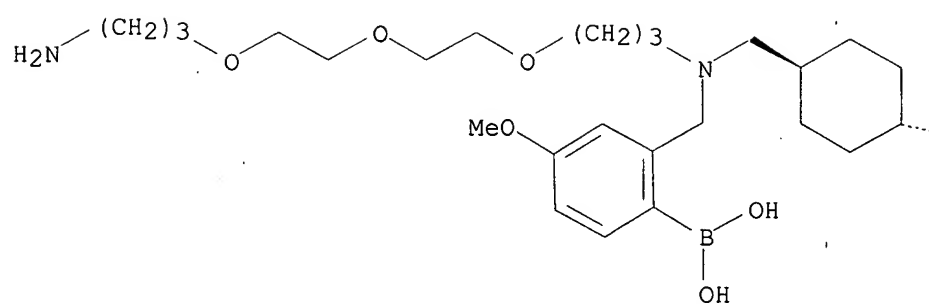
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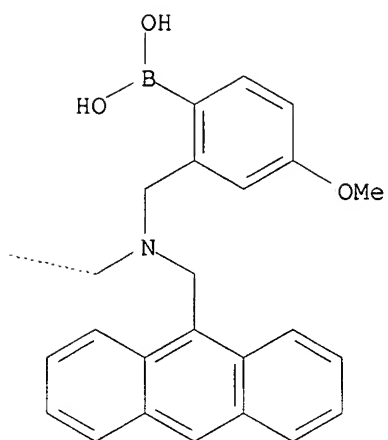
CMF C49 H67 B2 N3 O9

Relative stereochemistry.

PAGE 1-A



PAGE 1-B

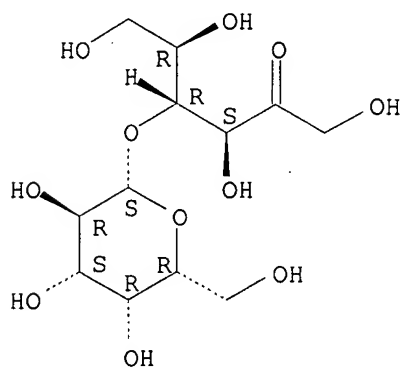


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



RN 673455-86-2 CAPLUS



CN D-Fructose, 4-O-β-D-galactopyranosyl-, compd. with  
[2-[15-amino-2-[[trans-4-[[ (9-anthracenylmethyl) [(2-borono-5-  
fluorophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
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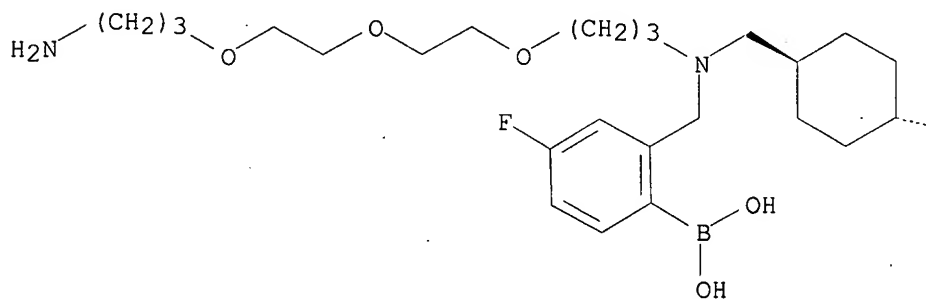
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CRN 673455-85-1

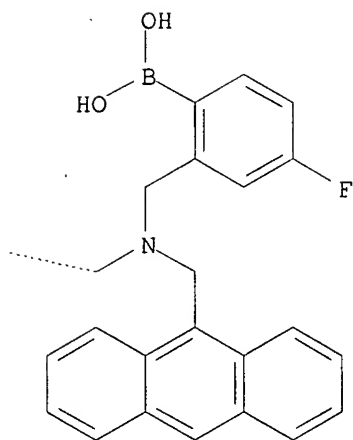
CMF C47 H61 B2 F2 N3 O7

Relative stereochemistry.

PAGE 1-A



PAGE 1-B

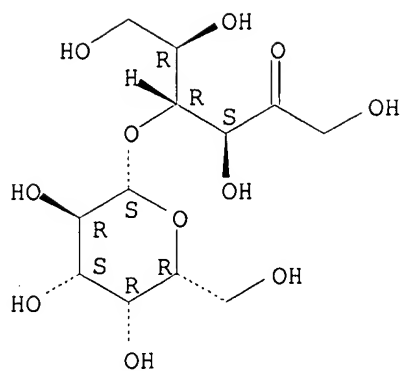


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



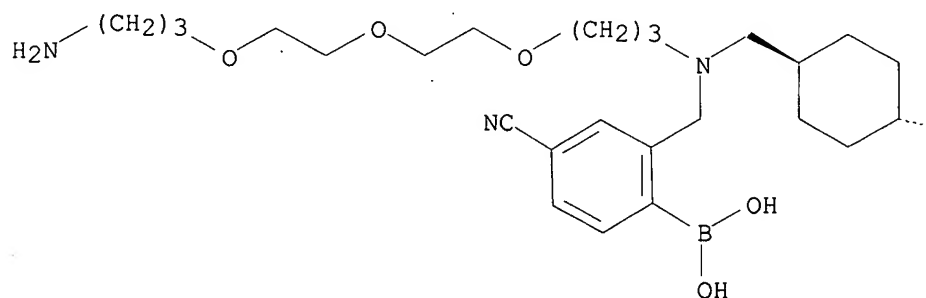
RN 673455-88-4 CAPLUS  
 CN D-Fructose, 4-O-β-D-galactopyranosyl-, compd. with  
 [2-[15-amino-2-[[trans-4-[[ (9-anthracenylmethyl) [(2-borono-5-  
 cyanophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
 azapentadec-1-yl]-4-cyanophenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

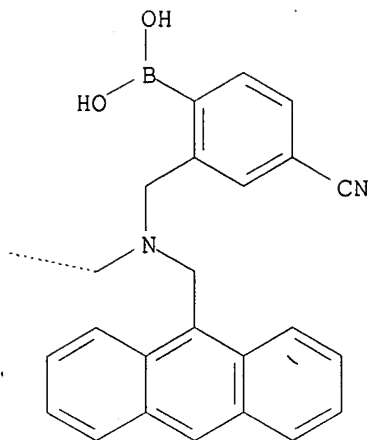
CM 1

CRN 673455-87-3  
 CMF C49 H61 B2 N5 O7

Relative stereochemistry.

PAGE 1-A



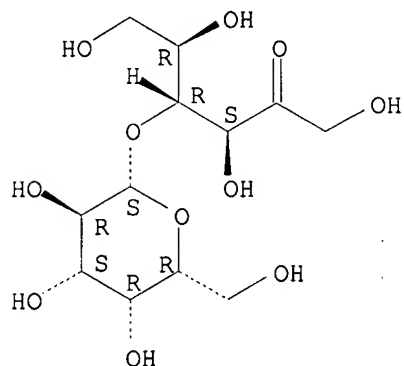


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



RN 673455-92-0 CAPLUS

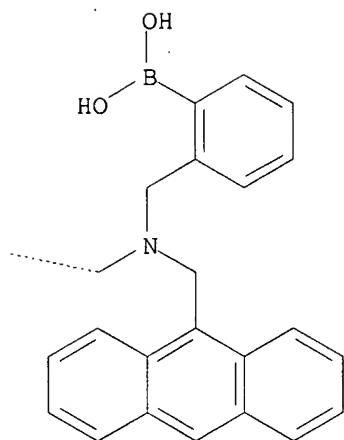
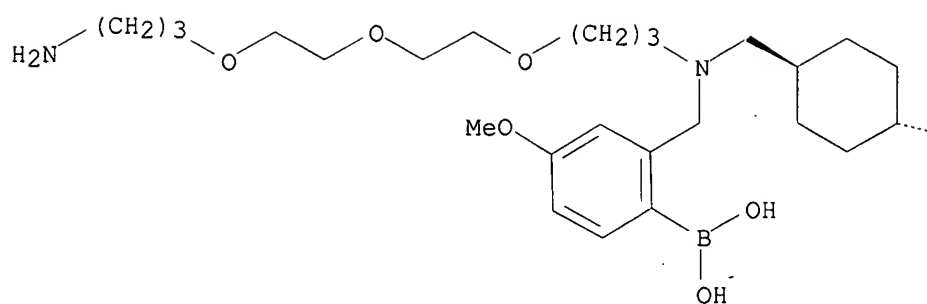
CN D-Fructose, 4-O- $\beta$ -D-galactopyranosyl-, compd. with  
[2-[15-amino-2-[[trans-4-[[9-anthracenylmethyl][(2-  
boronophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
azapentadec-1-yl]-4-methoxyphenyl]boronic acid (1:1) (9CI) (CA INDEX  
NAME)

CM 1

CRN 673455-91-9

CMF C48 H65 B2 N3 O8

Relative stereochemistry.

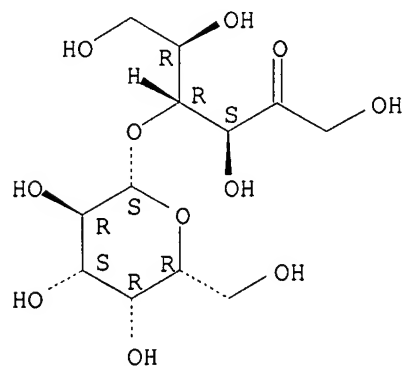


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



RN 673455-94-2 CAPLUS

CN D-Fructose, 4-O- $\beta$ -D-galactopyranosyl-, compd. with  
[2-[15-amino-2-[[trans-4-[[[9-anthracenylmethyl][(2-  
boronophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
azapentadec-1-yl]-4-fluorophenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

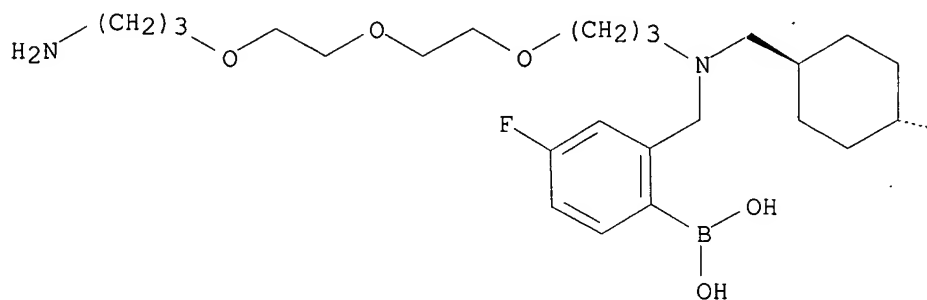
CM 1

CRN 673455-93-1

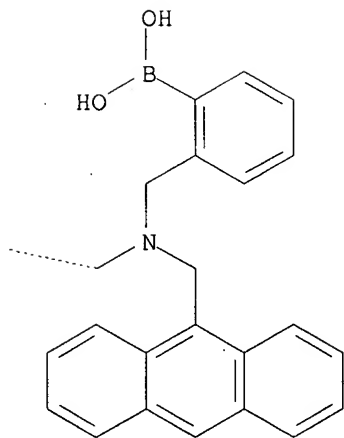
CMF C47 H62 B2 F N3 O7

Relative stereochemistry.

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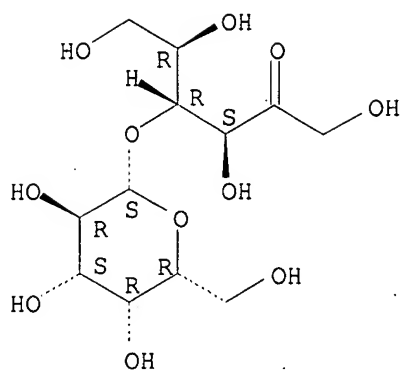


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



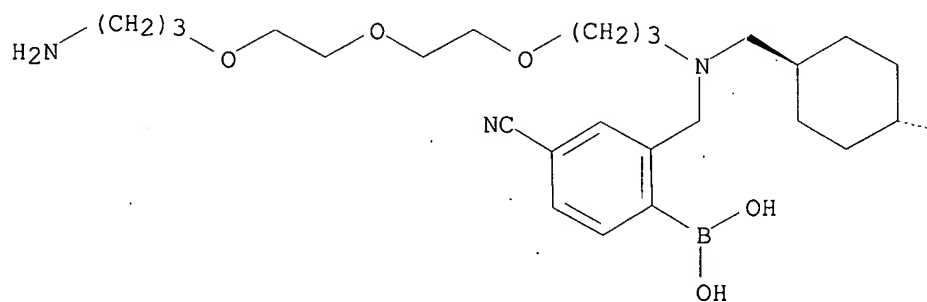
RN 673455-96-4 CAPLUS  
 CN D-Fructose, 4-O-β-D-galactopyranosyl-, compd. with  
 [2-[15-amino-2-[[trans-4-[[[9-anthracenylmethyl][(2-  
 boronophenyl)methyl]amino)methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
 azapentadec-1-yl]-4-cyanophenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

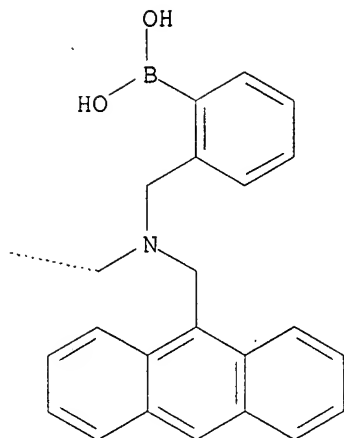
CM 1

CRN 673455-95-3  
 CMF C48 H62 B2 N4 O7

Relative stereochemistry.

PAGE 1-A



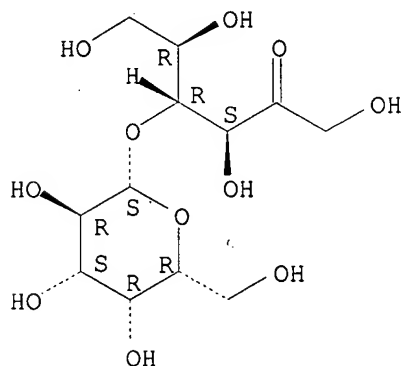


CM 2

CRN 4618-18-2

CMF C12 H22 O11

Absolute stereochemistry.



RN 673455-98-6 CAPLUS

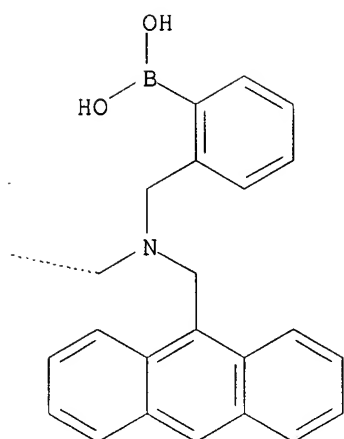
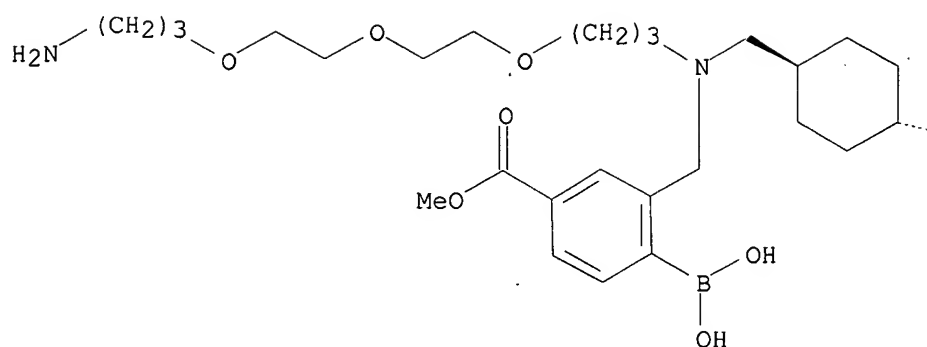
CN D-Fructose, 4-O-β-D-galactopyranosyl-, compd. with methyl  
3-[15-amino-2-[[trans-4-[[[9-anthracenylmethyl][(2-  
boronophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
azapentadec-1-yl]-4-boronobenzoate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 673455-97-5

CMF C49 H65 B2 N3 O9

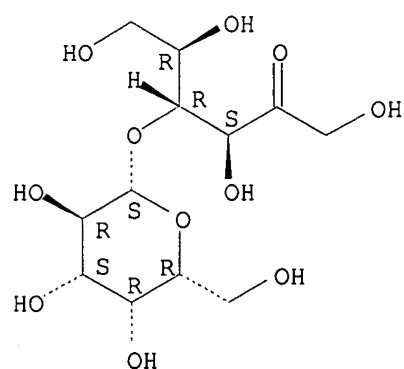
Relative stereochemistry.



CM 2

CRN 4618-18-2  
CMF C12 H22 O11

Absolute stereochemistry.





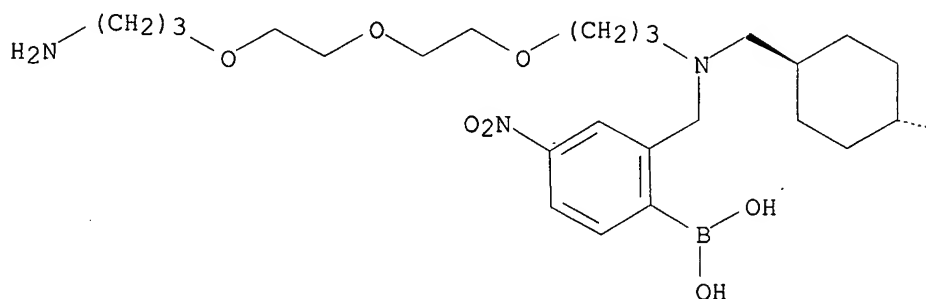
RN 673456-00-3 CAPLUS  
CN D-Fructose, 4-O-β-D-galactopyranosyl-, compd. with  
[2-[15-amino-2-[[trans-4-[[[9-anthracenylmethyl][(2-  
boronophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
azapentadec-1-yl]-4-nitrophenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

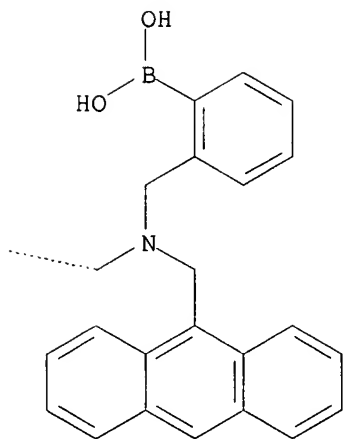
CRN 673455-99-7  
CMF C47 H62 B2 N4 O9

Relative stereochemistry.

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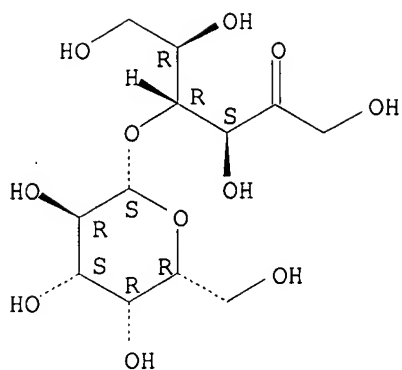
PAGE 1-B



CM 2

CRN 4618-18-2  
CMF C12 H22 O11

Absolute stereochemistry.

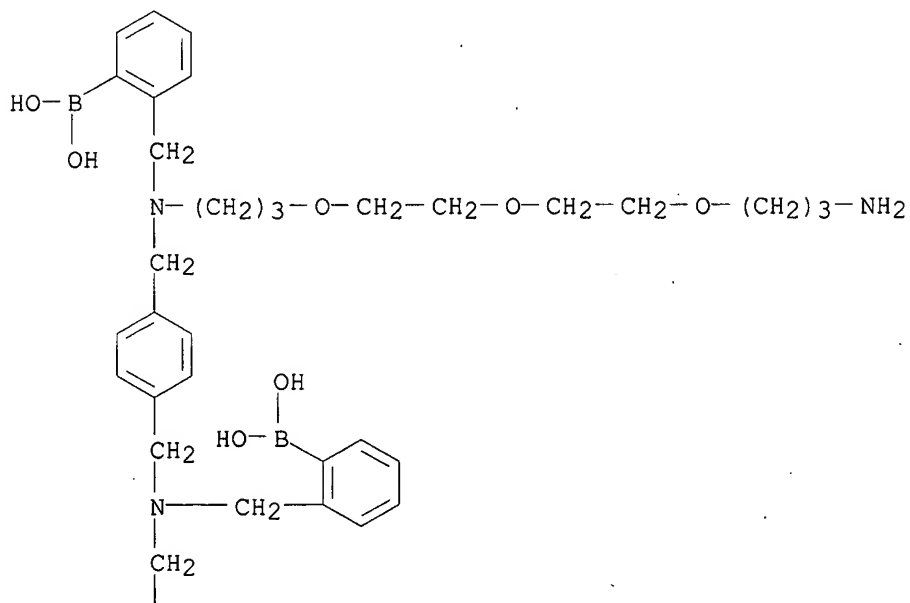


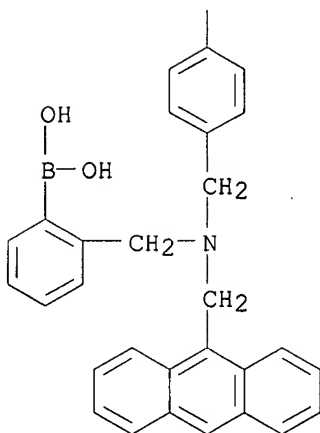
RN 673456-01-4 CAPLUS  
 CN D-Glucose, 6-O- $\alpha$ -D-galactopyranosyl-, compd. with  
 [2-[15-amino-2-[[4-[[[4-[[[9-anthracenylmethyl][(2-  
 boronophenyl)methyl]amino]methyl]phenyl]methyl][(2-  
 boronophenyl)methyl]amino]methyl]phenyl]methyl]-6,9,12-trioxa-2-  
 azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 673455-63-5  
 CMF C62 H73 B3 N4 O9

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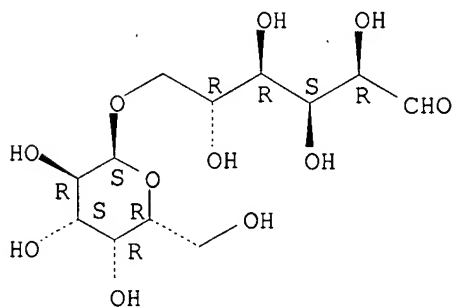


CM 2

CRN 585-99-9

CMF C12 H22 O11

Absolute stereochemistry.



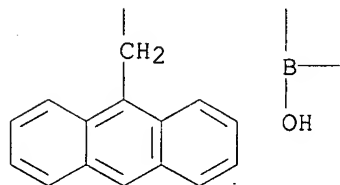
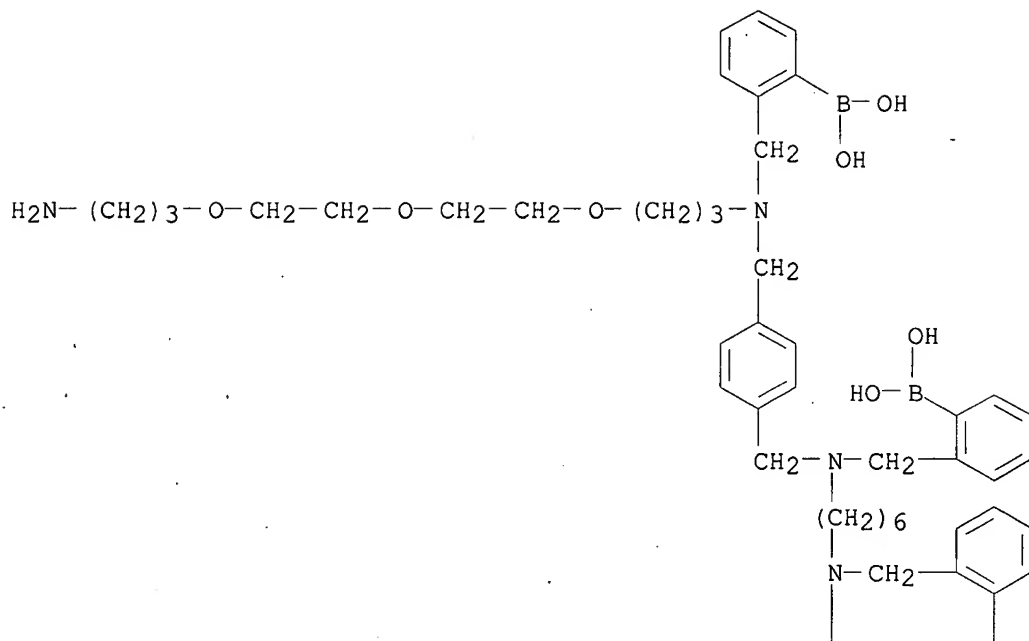
RN 673456-02-5 CAPLUS

CN D-Glucose, 6-O- $\alpha$ -D-galactopyranosyl-, compd. with  
[2-[15-amino-2-[[4-[[[6-[(9-anthracenylmethyl)[(2-boronophenyl)methyl]amino]hexyl][(2-boronophenyl)methyl]amino]methyl]phenyl]methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI)  
(CA INDEX NAME)

CM 1

CRN 673455-65-7

CMF C60 H77 B3 N4 O9



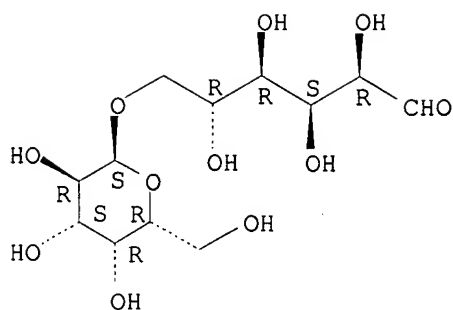
— OH

CM 2

CRN 585-99-9

CMF C12 H22 O11

Absolute stereochemistry.



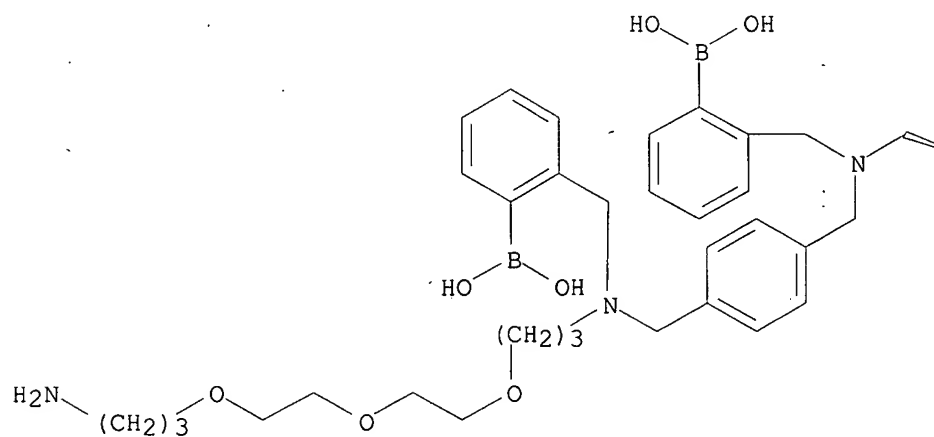
RN 673456-03-6 CAPLUS  
 CN D-Glucose, 6-O- $\alpha$ -D-galactopyranosyl-, compd. with  
 [2-[15-amino-2-[[4-[[[trans-4-[[9-anthracenylmethyl][(2-boronophenyl)methyl]amino)methyl]cyclohexyl)methyl][(2-boronophenyl)methyl]amino)methyl]phenyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

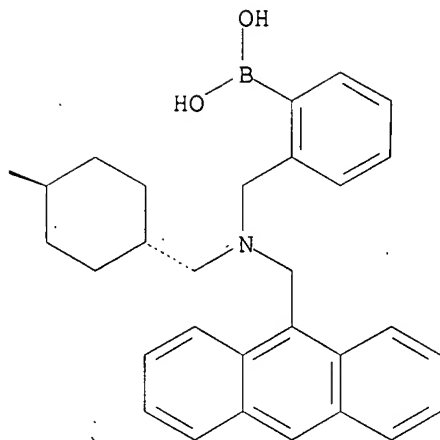
CM 1

CRN 673455-67-9  
 CMF C62 H79 B3 N4 O9

Relative stereochemistry.

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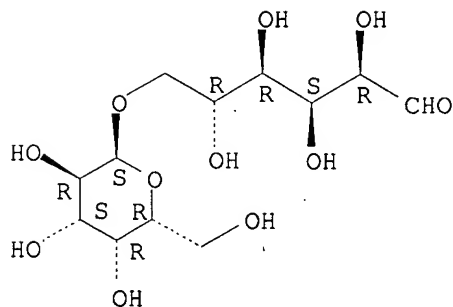


CM 2

CRN 585-99-9

CMF C12 H22 O11

Absolute stereochemistry.



RN 673456-04-7 CAPLUS

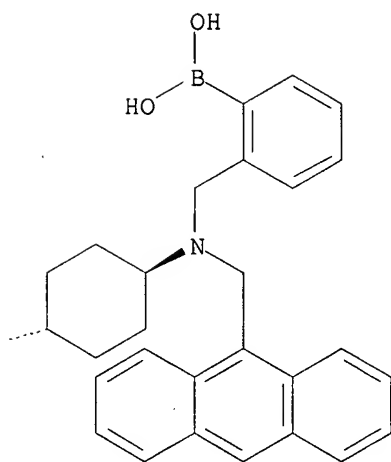
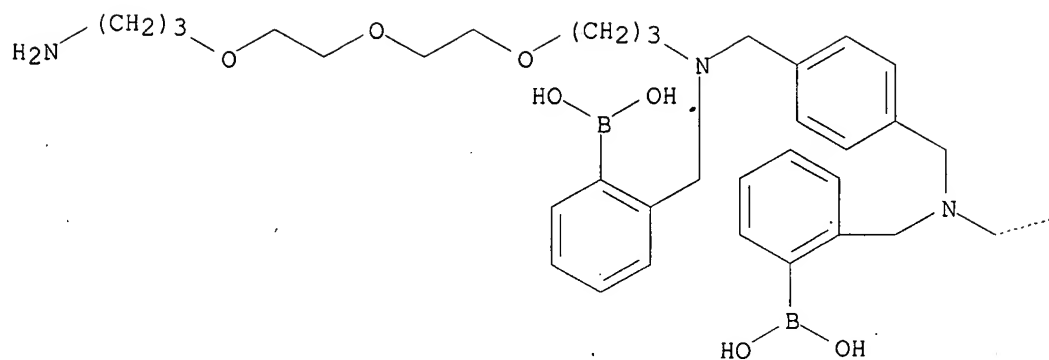
CN D-Glucose, 6-O-α-D-galactopyranosyl-, compd. with  
[2-[15-amino-2-[[4-[[[trans-4-[(9-anthracenylmethyl) [(2-boronophenyl)methyl]amino]cyclohexyl)methyl] [(2-boronophenyl)methyl]amino]methyl]phenyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 673455-69-1

CMF C61 H77 B3 N4 O9

Relative stereochemistry.

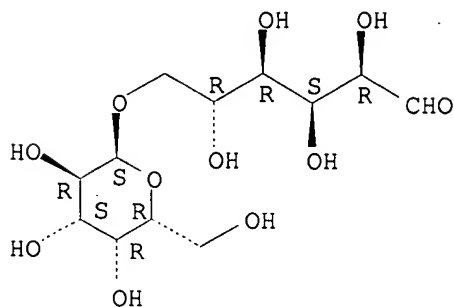


CM 2

CRN 585-99-9

CMF C12 H22 O11

Absolute stereochemistry.

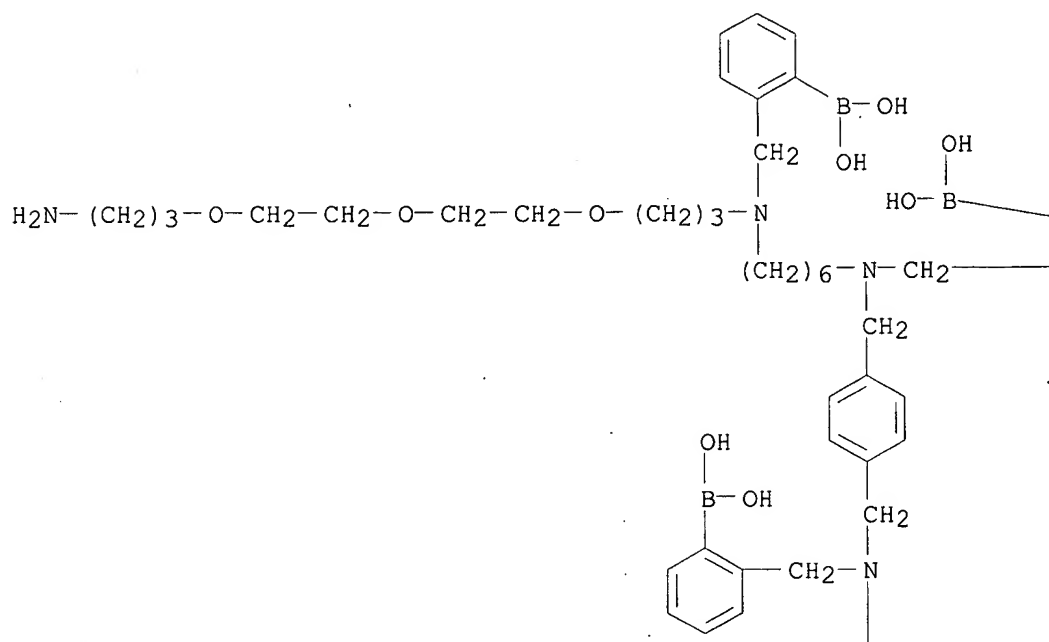


RN 673456-05-8 CAPLUS  
 CN D-Glucose, 6-O- $\alpha$ -D-galactopyranosyl-, compd. with  
 [2-[15-amino-2-[6-[[[4-[(9-anthracenylmethyl)[(2-boronophenyl)methyl]amino]methyl]phenyl]methyl][(2-boronophenyl)methyl]amino]hexyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

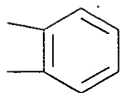
CM 1

CRN 673455-71-5  
 CMF C60 H77 B3 N4 O9

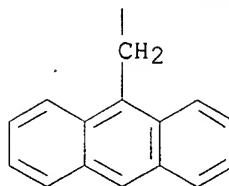
PAGE 1-A



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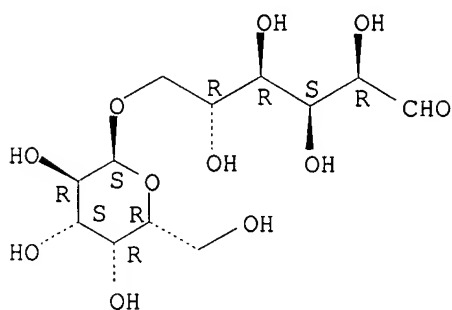


CM 2

CRN 585-99-9

CMF C12 H22 O11

Absolute stereochemistry.



RN 673456-06-9 CAPLUS

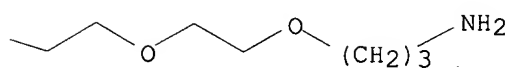
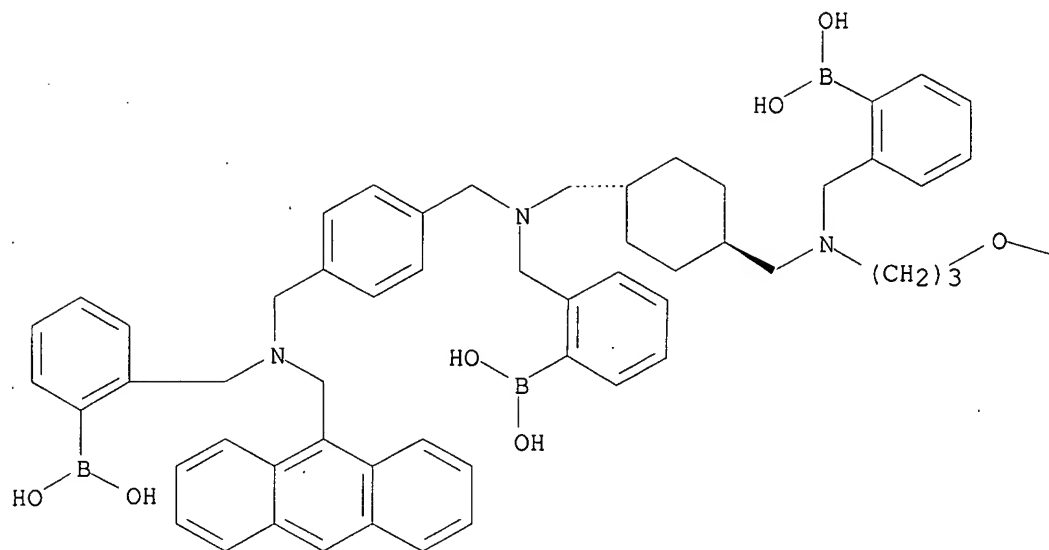
CN D-Glucose, 6-O- $\alpha$ -D-galactopyranosyl-, compd. with  
 [2-[15-amino-2-[[trans-4-[[[4-[(9-anthracenylmethyl) [(2-  
 boronophenyl)methyl]amino]methyl]phenyl)methyl] [(2-  
 boronophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
 azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 673455-73-7

CMF C62 H79 B3 N4 O9

Relative stereochemistry.

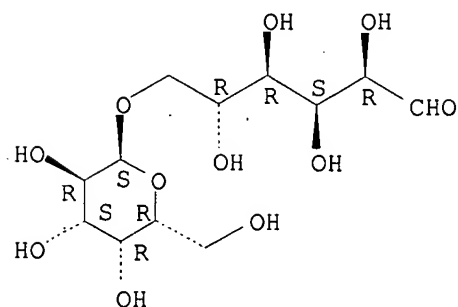


CM 2

CRN 585-99-9

CMF C12 H22 O11

Absolute stereochemistry.



RN 673456-07-0 CAPLUS

CN D-Glucose, 6-O- $\alpha$ -D-galactopyranosyl-, compd. with  
[2-[15-amino-2-[[trans-4-[[[4-[[[9-anthracenylmethyl] (2-

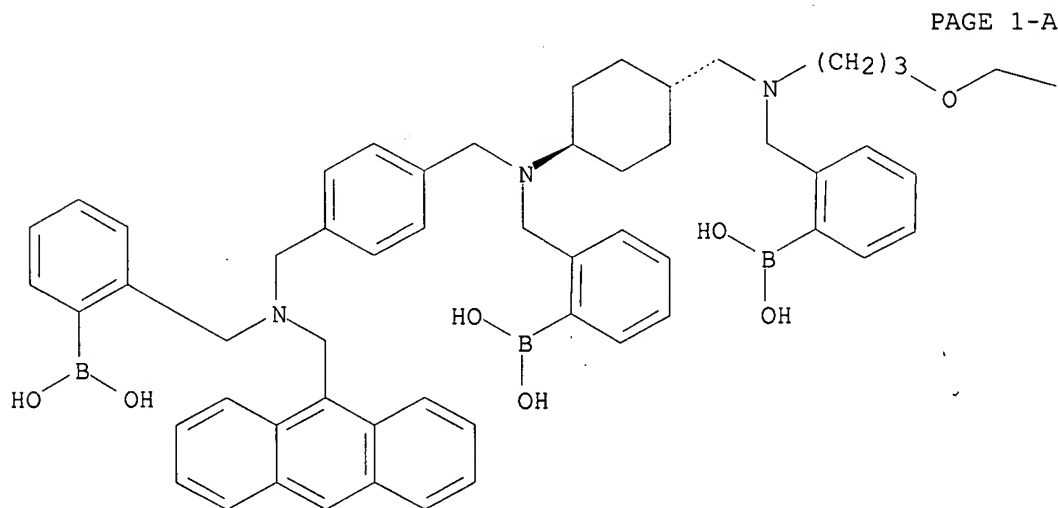
boronophenyl)methyl]amino)methyl]phenyl)methyl][(2-boronophenyl)methyl]amino]cyclohexyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

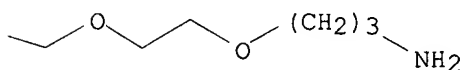
CRN 673455-75-9

CMF C61 H77 B3 N4 O9

Relative stereochemistry.



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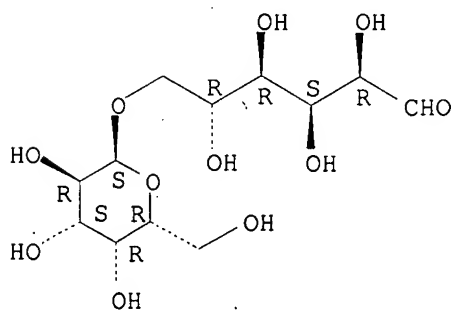


CM 2

CRN 585-99-9

CMF C12 H22 O11

Absolute stereochemistry.



RN 673456-08-1 CAPLUS

CN D-Fructose, 3-O- $\alpha$ -D-glucopyranosyl-, compd. with [2-[15-amino-2-[4-[[[4-[(9-anthracenylmethyl)[(2-boronophenyl)methyl]amino)methyl]phenyl)methyl][(2-boronophenyl)methyl]amino)methyl]phenyl)methyl]-6,9,12-trioxa-2-

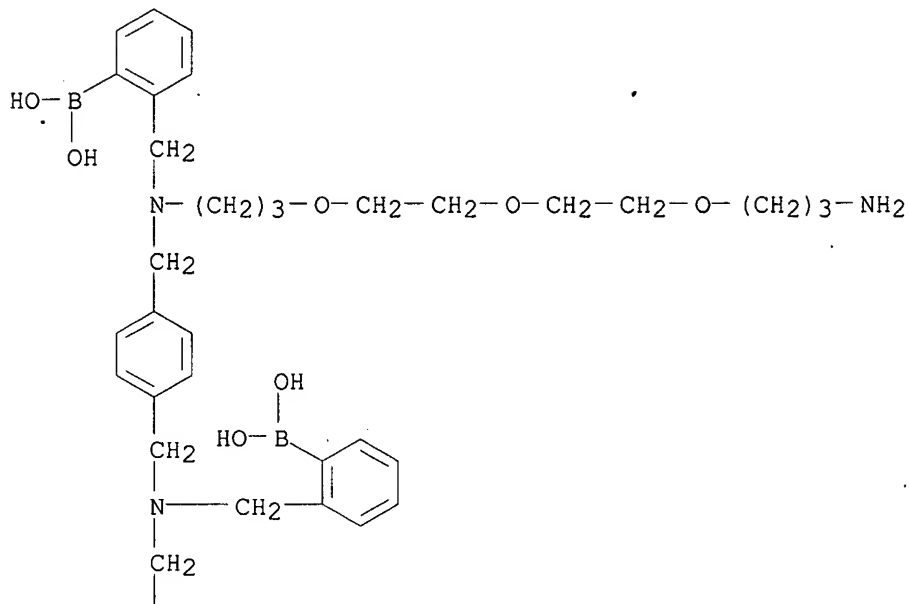
azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

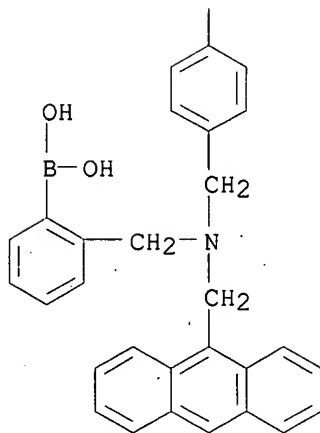
CRN 673455-63-5

CMF C62 H73 B3 N4 O9

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PAGE 2-A

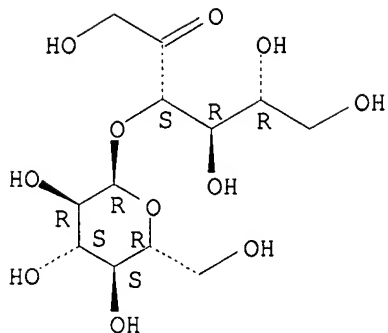


CM 2

CRN 547-25-1

CMF C12 H22 O11

Absolute stereochemistry.

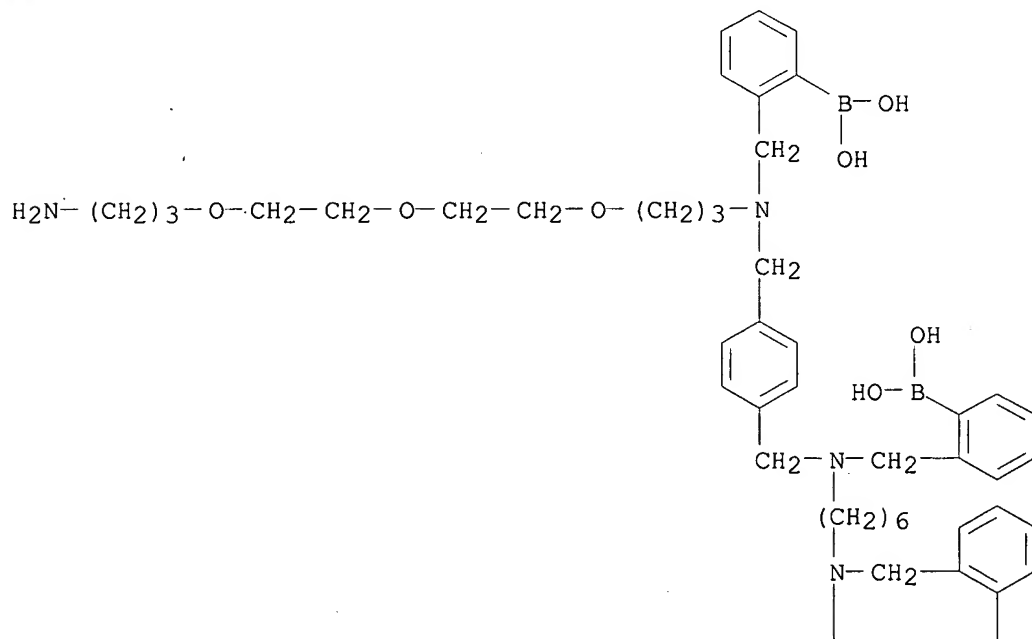


RN 673456-09-2 CAPLUS  
 CN D-Fructose, 3-O- $\alpha$ -D-glucopyranosyl-, compd. with  
 [2-[15-amino-2-[[4-[[[6-[(9-anthracenylmethyl)[(2-  
 boronophenyl)methyl]amino]hexyl][(2-boronophenyl)methyl]amino]methyl]phenyl  
 1)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI)  
 (CA INDEX NAME)

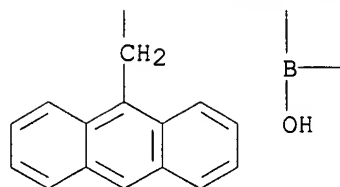
CM 1

CRN 673455-65-7  
 CMF C60 H77 B3 N4 O9

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PAGE 2-A



PAGE 2-B

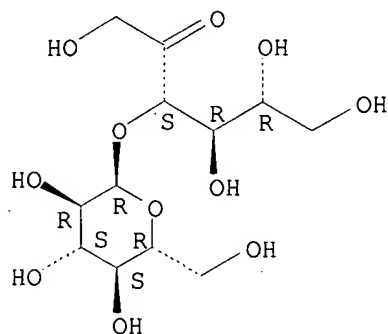
— OH

CM 2

CRN 547-25-1

CMF C12 H22 O11

Absolute stereochemistry.



RN 673456-10-5 CAPLUS

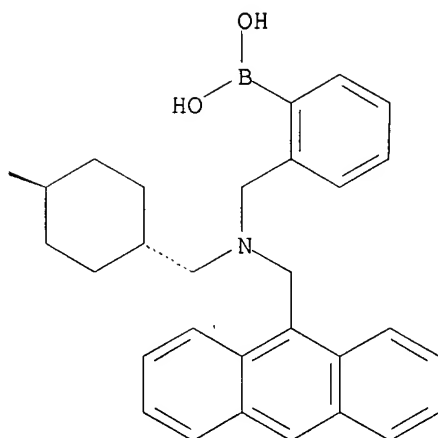
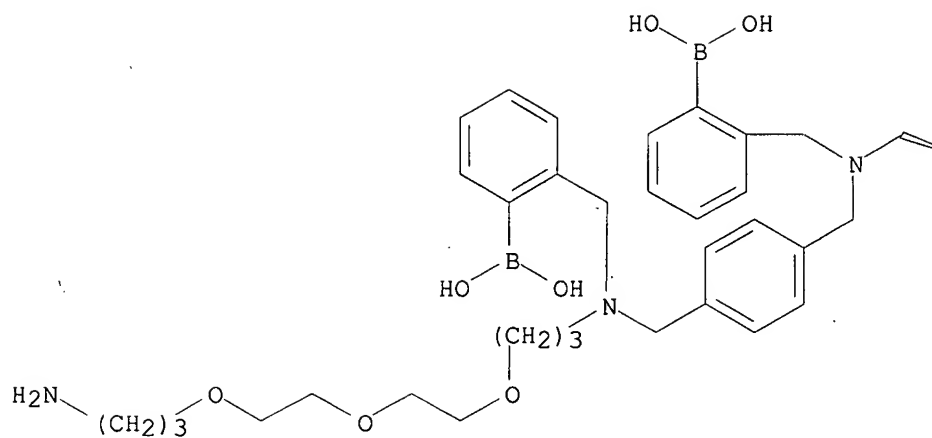
CN D-Fructose, 3-O- $\alpha$ -D-glucopyranosyl-, compd. with  
[2-[15-amino-2-[[4-[[[trans-4-[[[9-anthracenylmethyl]-(2-boronophenyl)methyl]amino]methyl]cyclohexyl)methyl]-(2-boronophenyl)methyl]amino]methyl]phenyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 673455-67-9

CMF C62 H79 B3 N4 O9

Relative stereochemistry.

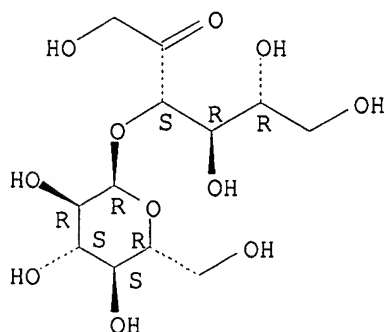


CM 2

CRN 547-25-1

CMF C12 H22 O11

Absolute stereochemistry.



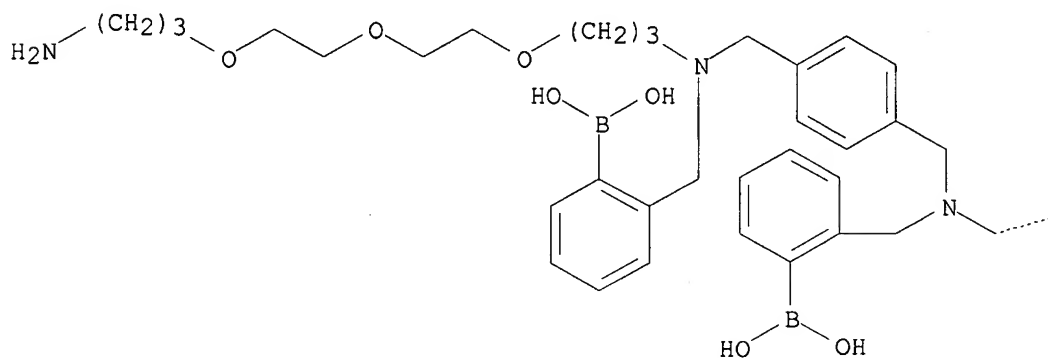
RN 673456-11-6 CAPLUS  
 CN D-Fructose, 3-O- $\alpha$ -D-glucopyranosyl-, compd. with  
 [2-[15-amino-2-[[4-[[[trans-4-[(9-anthracenylmethyl){(2-  
 boronophenyl)methyl]amino]cyclohexyl)methyl][(2-  
 boronophenyl)methyl]amino]methyl]phenyl)methyl]-6,9,12-trioxa-2-  
 azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

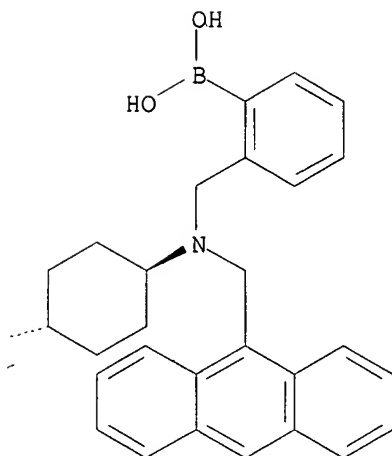
CRN 673455-69-1  
 CMF C61 H77 B3 N4 O9

Relative stereochemistry.

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PAGE 1-B

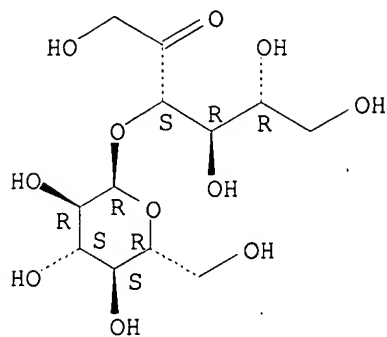


CM 2

CRN 547-25-1  
 CMF C12 H22 O11



Absolute stereochemistry.



RN 673456-12-7 CAPLUS

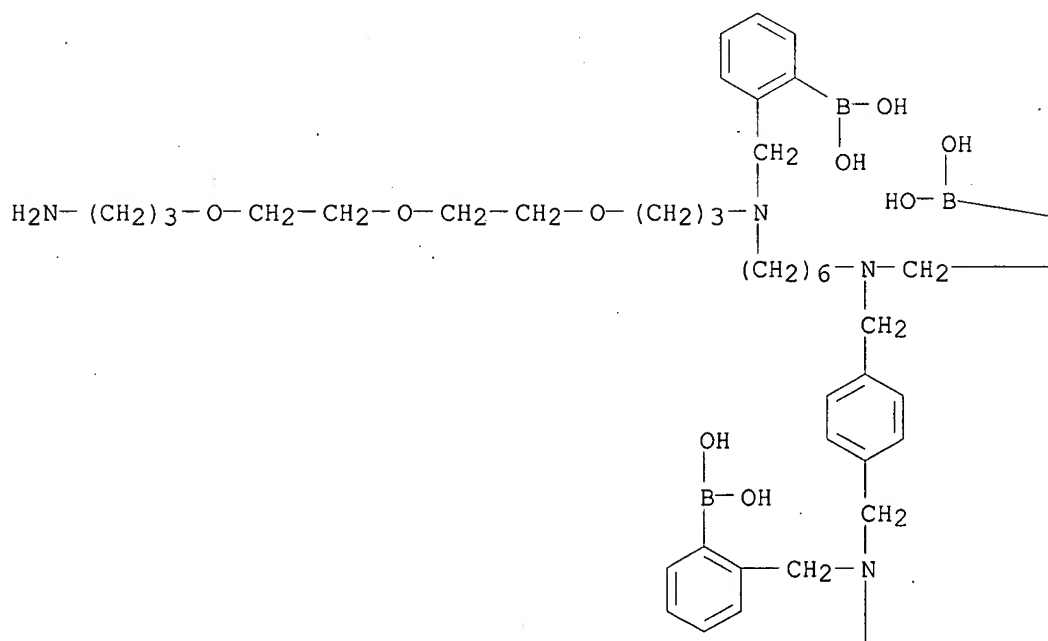
CN D-Fructose, 3-O- $\alpha$ -D-glucopyranosyl-, compd. with  
[2-[15-amino-2-[6-[[[4-[[[9-anthracenylmethyl][(2-  
boronophenyl)methyl]amino]methyl]phenyl]methyl][(2-  
boronophenyl)methyl]amino]hexyl]-6,9,12-trioxa-2-azapentadec-1-  
yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

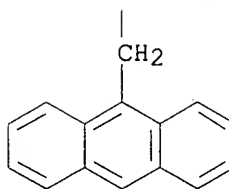
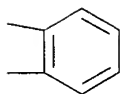
CM 1

CRN 673455-71-5

CMF C60 H77 B3 N4 O9

PAGE 1-A



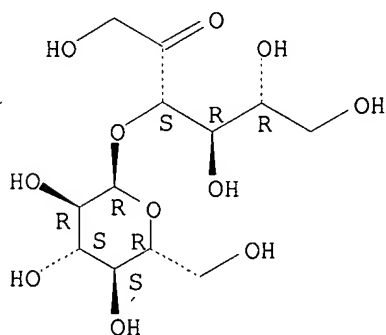


CM 2

CRN 547-25-1

CMF C12 H22 O11

Absolute stereochemistry.



RN 673456-13-8 CAPLUS

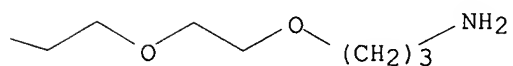
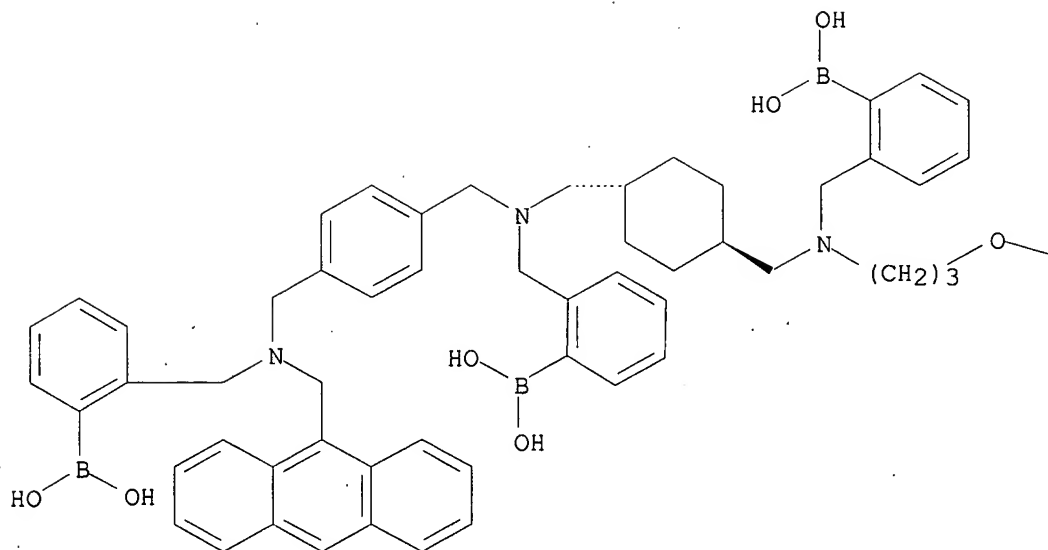
CN D-Fructose, 3-O- $\alpha$ -D-glucopyranosyl-, compd. with  
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 boronophenyl)methyl]amino]methyl]phenyl)methyl][(2-  
 boronophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-  
 azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 673455-73-7

CMF C62 H79 B3 N4 O9

Relative stereochemistry.

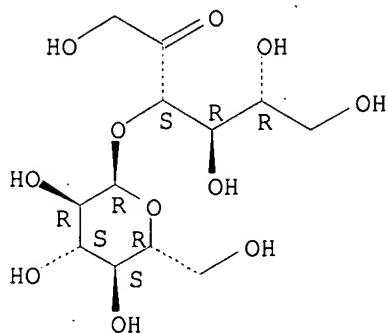


CM 2

CRN 547-25-1

CMF C12 H22 O11

Absolute stereochemistry.



RN 673456-14-9 CAPLUS

CN D-Fructose, 3-O- $\alpha$ -D-glucopyranosyl-, compd. with

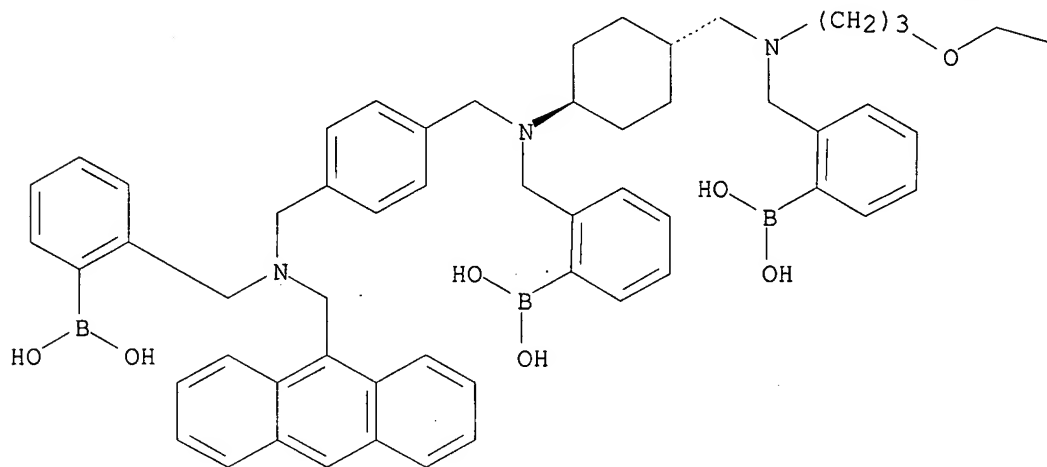
[2-[15-amino-2-[[[trans-4-[[[4-[[[9-anthracenylmethyl][(2-boronophenyl)methyl]amino)methyl]phenyl)methyl][(2-boronophenyl)methyl]amino]cyclohexyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]boronic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

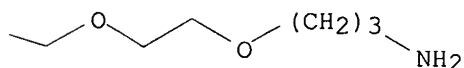
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CMF C61 H77 B3 N4 O9

Relative stereochemistry.

PAGE 1-A



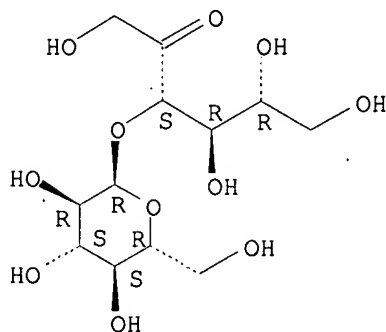
PAGE 1-B



CM 2

CRN 547-25-1  
CMF C12 H22 O11

Absolute stereochemistry.



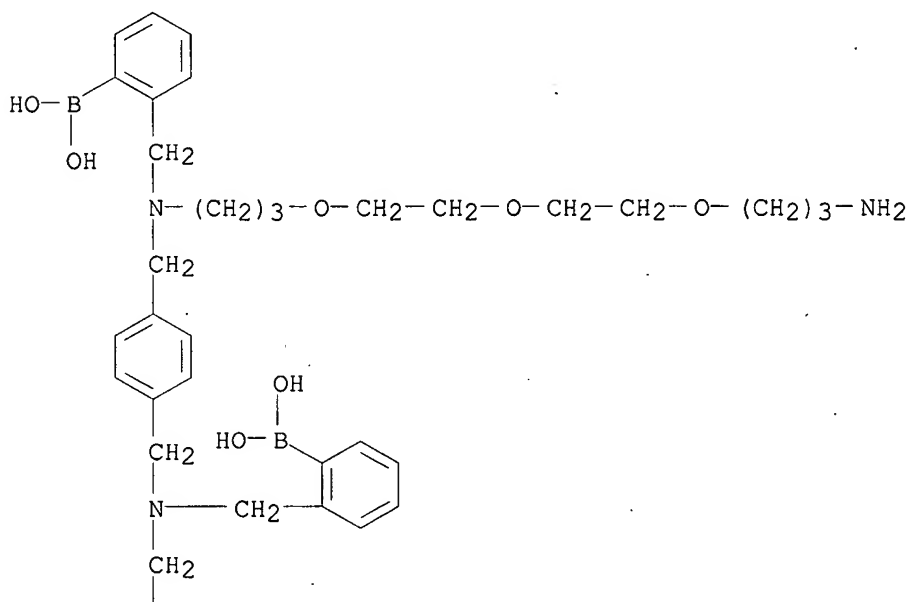
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673455-69-1P 673455-71-5P 673455-73-7P  
673455-75-9P 673455-77-1P 673455-81-7P

RL: CPN (Combinatorial preparation); CRT (Combinatorial reactant); RCT (Reactant); CMBI (Combinatorial study); PREP (Preparation); RACT (Reactant or reagent)

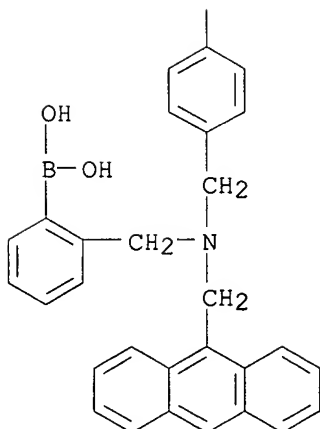
673455-63-5 CAPLUS

RN	673455-63-5	CAPLUS
CN	Boronic acid, [2-[15-amino-2-[4-[[[4-[(9-anthracenylmethyl) [(2-boronophenyl)methyl]amino]methyl]phenyl)methyl] [(2-boronophenyl)methyl]amino]methyl]phenyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]- (9CI) (CA INDEX NAME)	

PAGE 1-A

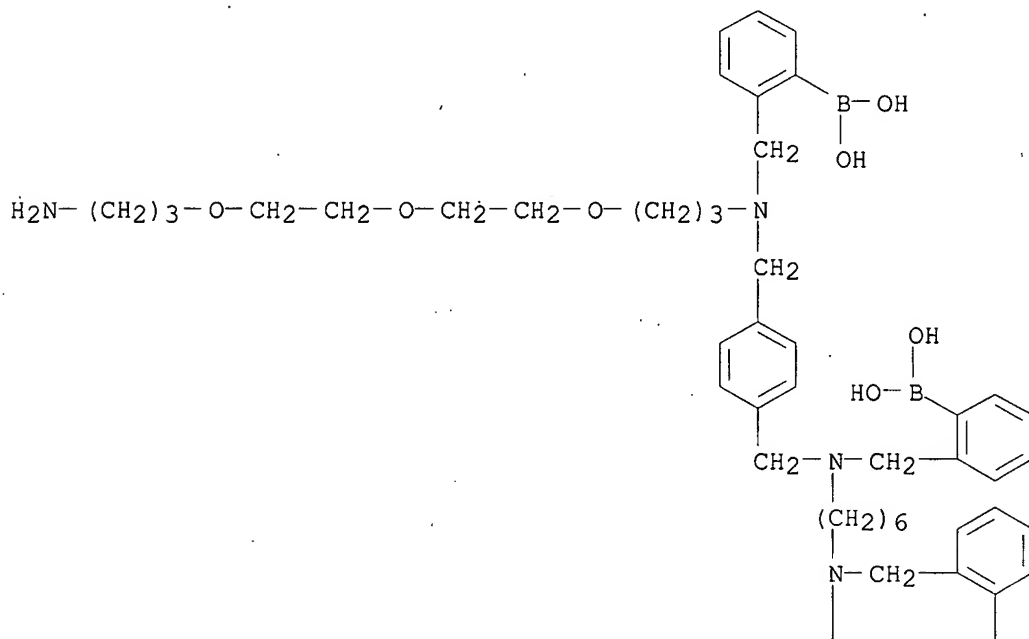


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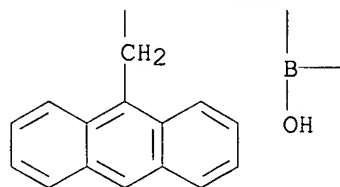


RN 673455-65-7 CAPLUS  
 CN Boronic acid, [2-[15-amino-2-[[4-[[[6-[(9-anthracenylmethyl)[(2-boronophenyl)methyl]amino]hexyl][(2-boronophenyl)methyl]amino]methyl]phenyl]methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

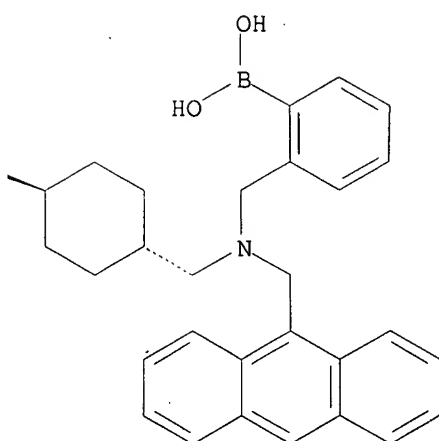
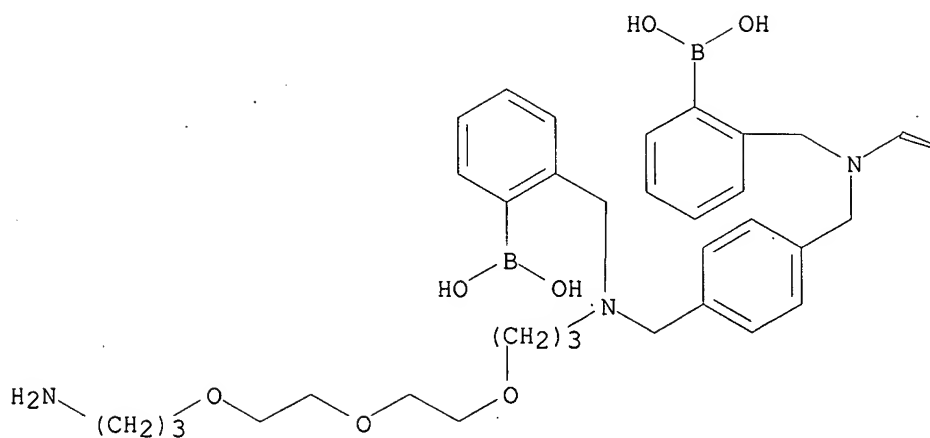


PAGE 2-B

— OH

RN 673455-67-9 CAPLUS  
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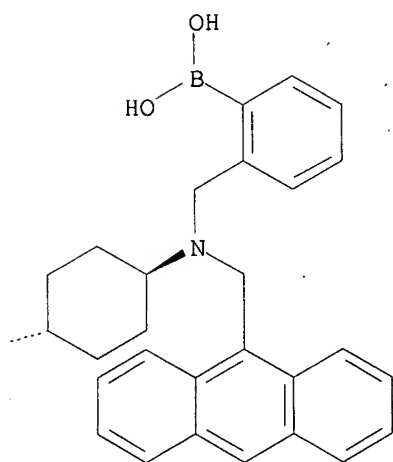
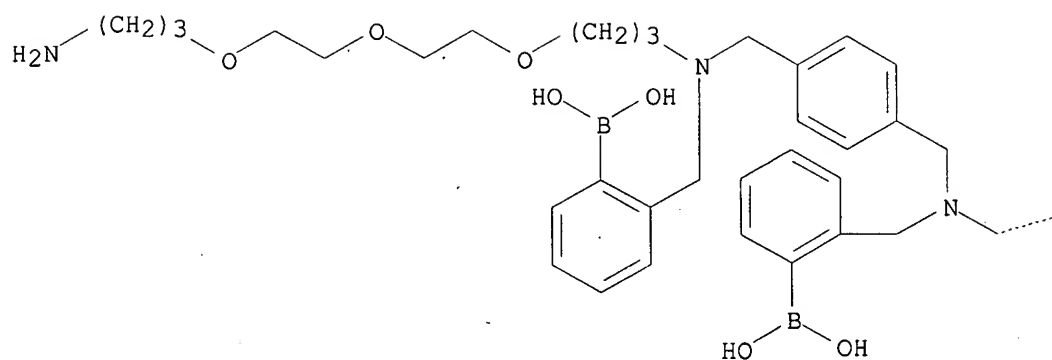
Relative stereochemistry.



RN 673455-69-1 CAPLUS

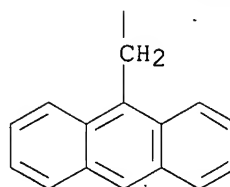
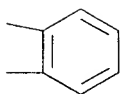
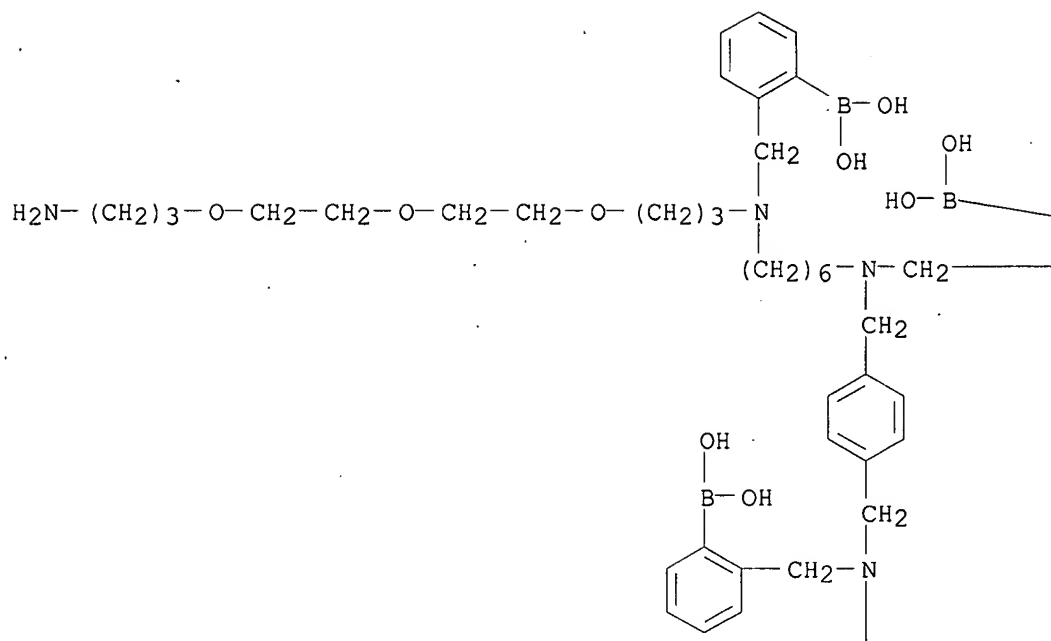
CN Boronic acid, [2-[15-amino-2-[[4-[[[trans-4-[(9-anthracenylmethyl)[(2-boronophenyl)methyl]amino]cyclohexyl)methyl][(2-boronophenyl)methyl]amino]methyl]phenyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



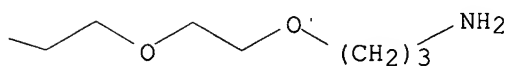
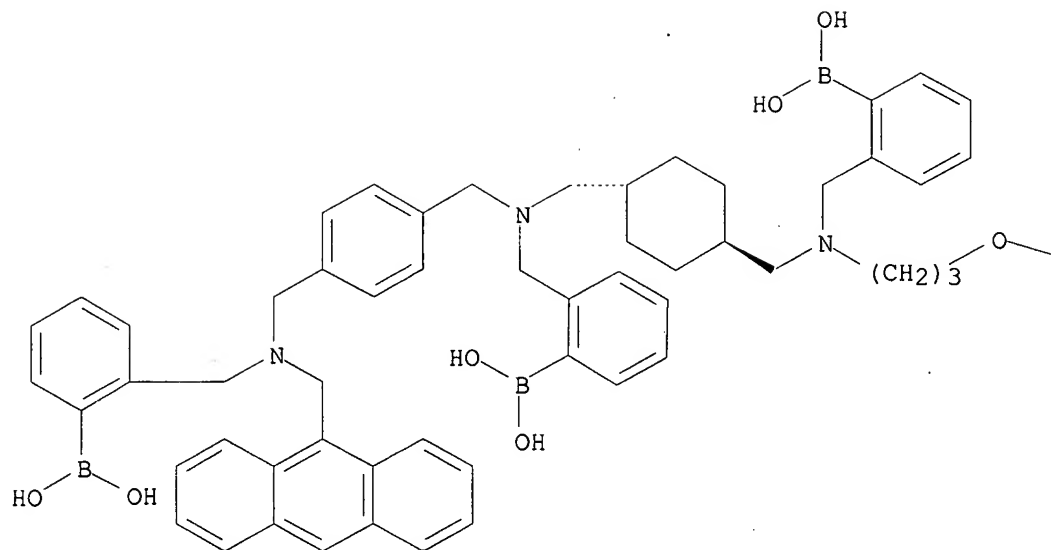
RN 673455-71-5 CAPLUS  
 CN Boronic acid, [2-[15-amino-2-[6-[[[4-[[[9-anthracenylmethyl][(2-boronophenyl)methyl]amino]methyl]phenyl)methyl][(2-boronophenyl)methyl]amino]hexyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]-(9CI) (CA INDEX NAME)





RN 673455-73-7 CAPLUS  
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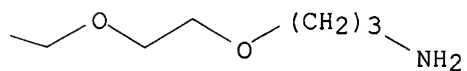
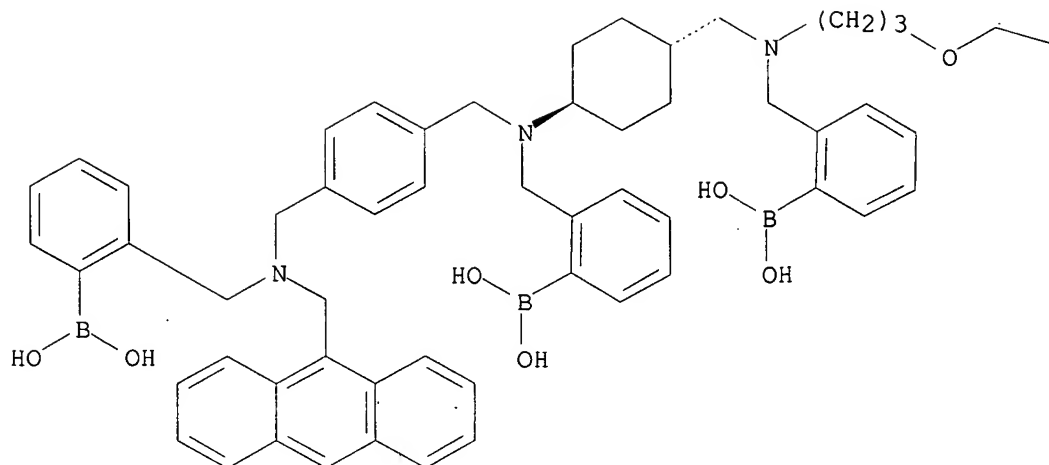
Relative stereochemistry.



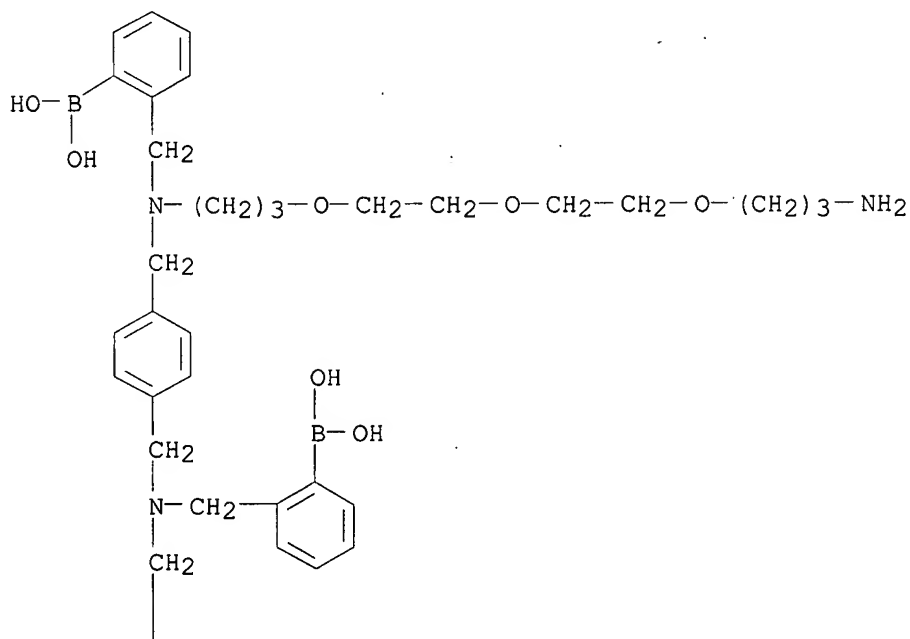
RN 673455-75-9 CAPLUS

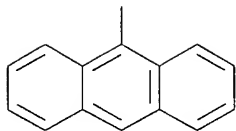
CN Boronic acid, [2-[15-amino-2-[[trans-4-[[[4-[[[9-anthracenylmethyl][(2-boronophenyl)methyl]amino]methyl]phenyl]methyl][(2-boronophenyl)methyl]amino]cyclohexyl]methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 673455-77-1 CAPLUS  
 CN Boronic acid, [2-[15-amino-2-[[4-[[[9-anthracenylmethyl][(2-boronophenyl)methyl]amino]methyl]phenyl]methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]- (9CI) (CA INDEX NAME)

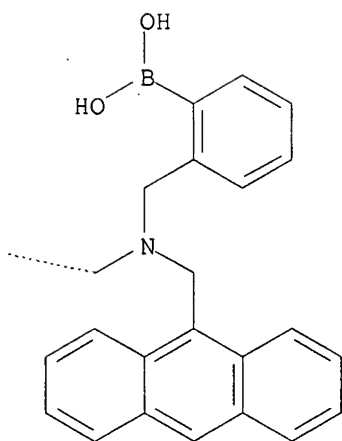
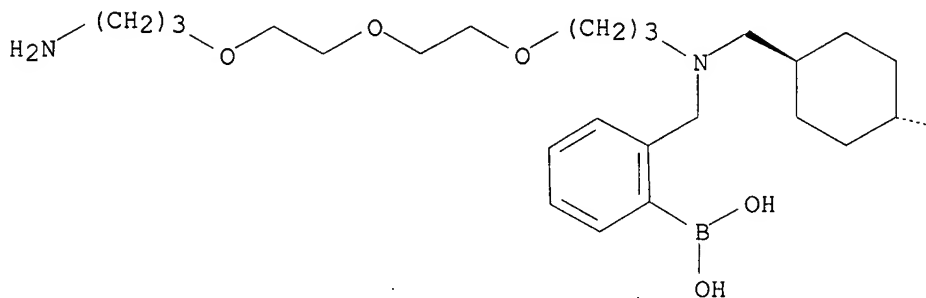




RN 673455-81-7 CAPLUS

CN Boronic acid, [2-[15-amino-2-[[trans-4-[[ (9-anthracenylmethyl) [(2-boronophenyl)methyl]amino]methyl]cyclohexyl]methyl]-6,9,12-trioxa-2-azapentadec-1-yl]phenyl]- (9CI) (CA INDEX NAME)

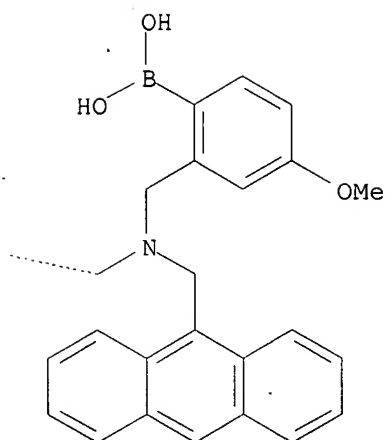
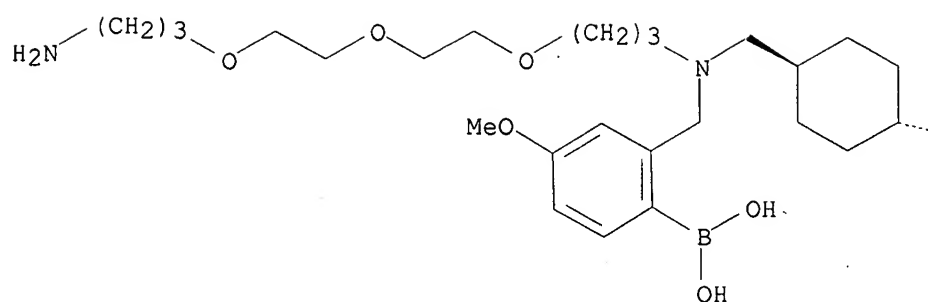
Relative stereochemistry.



RN 673455-83-9 CAPLUS

CN Boronic acid, [2-[15-amino-2-[[trans-4-[[ (9-anthracenylmethyl) [(2-borono-5-methoxyphenyl)methyl]amino]methyl]cyclohexyl]methyl]-6,9,12-trioxa-2-azapentadec-1-yl]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)

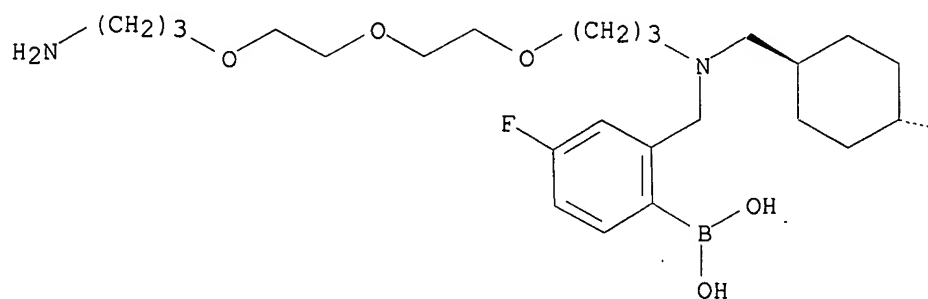
Relative stereochemistry.

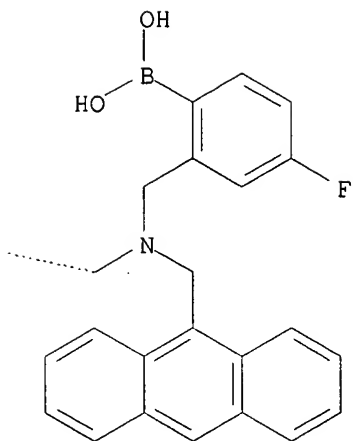


RN 673455-85-1 CAPLUS

CN Boronic acid, [2-[15-amino-2-[[trans-4-[[[9-anthracenylmethyl][(2-borono-5-fluorophenyl)methyl]amino)methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]-4-fluorophenyl]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

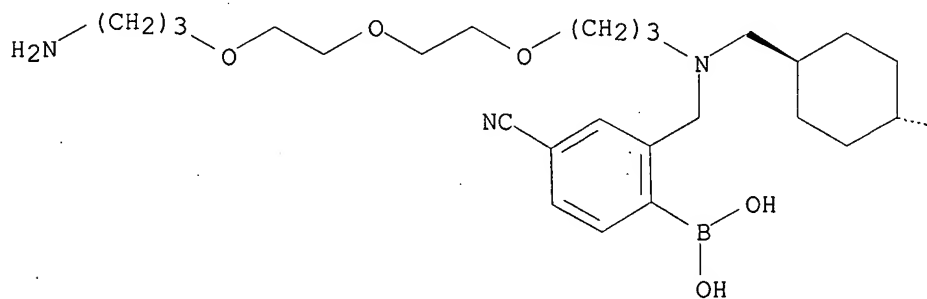


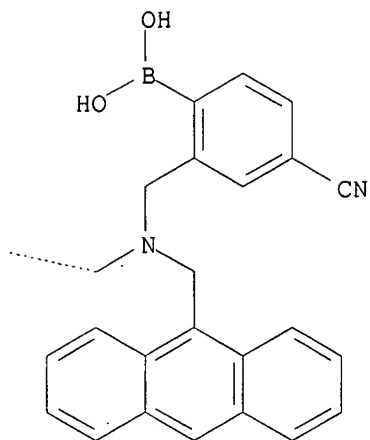


RN 673455-87-3 CAPLUS

CN Boronic acid, [2-[15-amino-2-[[trans-4-[[[9-anthracenylmethyl][(2-borono-5-cyanophenyl)methyl]amino]methyl]cyclohexyl]methyl]-6,9,12-trioxa-2-azapentadec-1-yl]-4-cyanophenyl]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

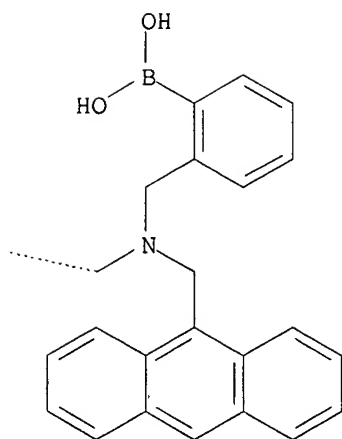
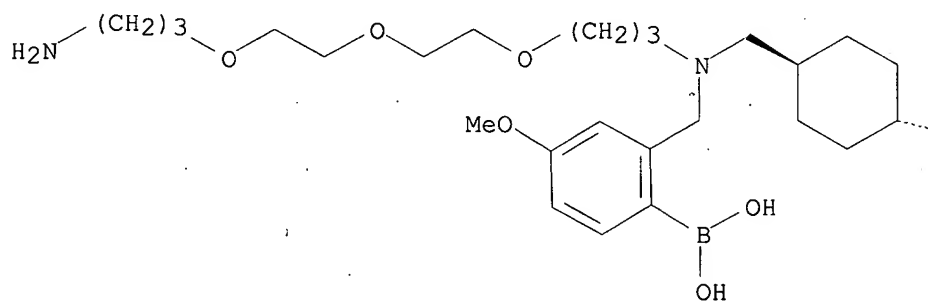




RN 673455-91-9 CAPLUS

CN Boronic acid, [2-[15-amino-2-[[trans-4-[[ (9-anthracenylmethyl) [(2-boronophenyl)methyl]amino]methyl]cyclohexyl]methyl]-6,9,12-trioxa-2-azapentadec-1-yl]-4-methoxyphenyl]- (9CI) (CA INDEX NAME)

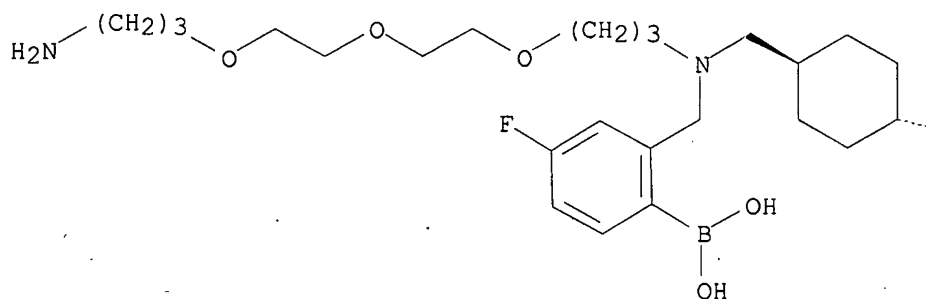
Relative stereochemistry.



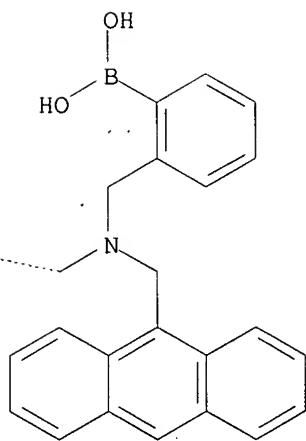
RN 673455-93-1 CAPLUS  
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Relative stereochemistry.

PAGE 1-A



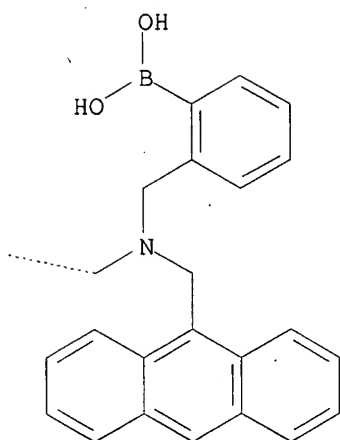
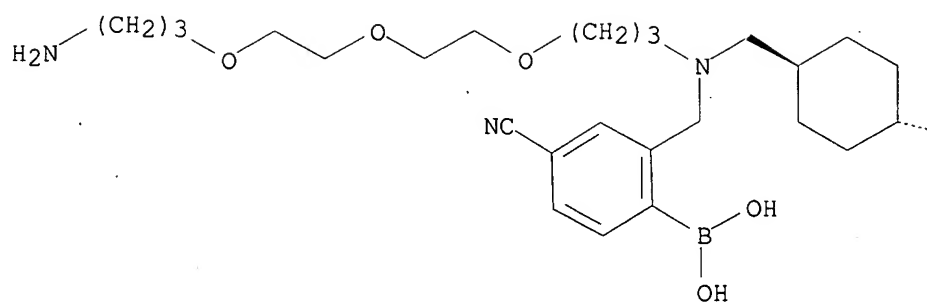
PAGE 1-B



RN 673455-95-3 CAPLUS  
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Relative stereochemistry.

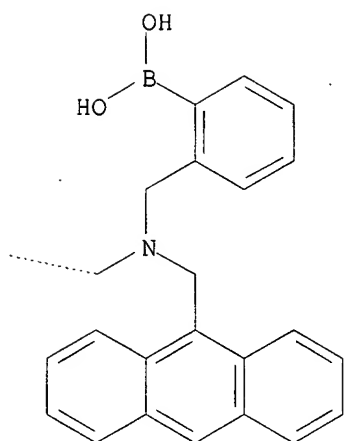
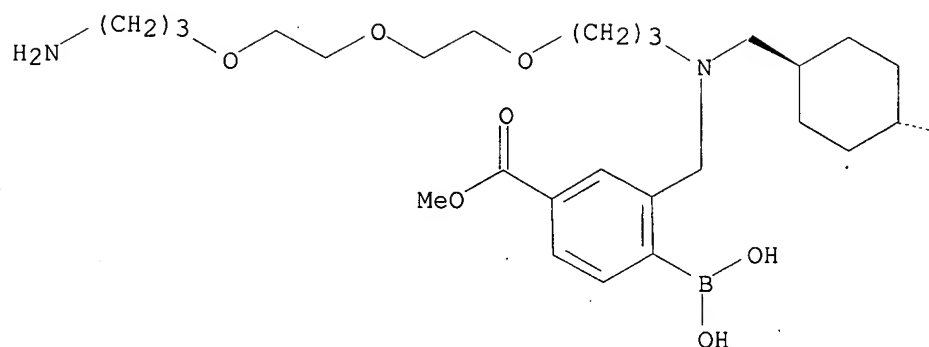




RN 673455-97-5 CAPLUS

CN Benzoic acid, 3-[15-amino-2-[[trans-4-[[[(9-anthracenylmethyl)[(2-boronophenyl)methyl]amino]methyl]cyclohexyl]methyl]-6,9,12-trioxa-2-azapentadec-1-yl]-4-borono-, 1-methyl ester (9CI) (CA INDEX NAME)

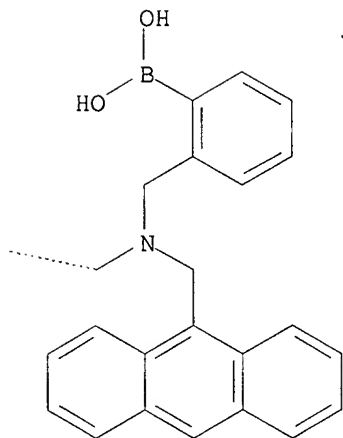
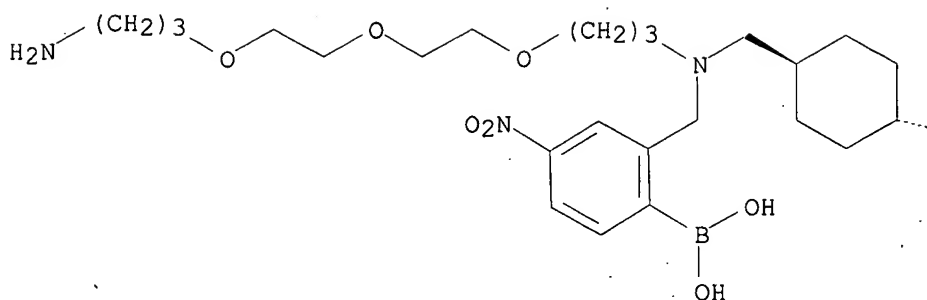
Relative stereochemistry.



RN 673455-99-7 CAPLUS

CN Boronic acid, [2-[15-amino-2-[[trans-4-[[[9-anthracenylmethyl][(2-boronophenyl)methyl]amino]methyl]cyclohexyl)methyl]-6,9,12-trioxa-2-azapentadec-1-yl]-4-nitrophenyl]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:334531 CAPLUS

DOCUMENT NUMBER: 138:334060

TITLE: Detection of glucose in solutions also containing an alpha-hydroxy acid or a beta-diketone

INVENTOR(S): Daniloff, George Y.; Kalivretenos, Aristotle G.; Nikolaitchik, Alexandre V.

PATENT ASSIGNEE(S): Sensors for Medicine and Science, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 49 pp., Cont.-in-part of U.S. Ser. No. 29,184.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003082663	A1	20030501	US 2002-187903	20020703
US 6800451	B2	20041005		
US 2002090734	A1	20020711	US 2001-754217	20010105

US 2002127626	A1	20020912	US 2001-29184	20011228
CA 2478979	A1	20030925	CA 2003-2478979	20030314
WO 2003078424	A1	20030925	WO 2003-US7938	20030314
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,				
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,				
TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,				
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,				
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003220293	A1	20030929	AU 2003-220293	20030314
EP 1490359	A1	20041229	EP 2003-716591	20030314
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003008412	A	20050329	BR 2003-8412	20030314
JP 2005530130	T	20051006	JP 2003-576429	20030314
CN 1826337	A	20060830	CN 2003-810756	20030314
US 2005043275	A1	20050224	US 2004-956133	20041004
US 7078554	B2	20060718		

PRIORITY APPLN. INFO.:

US 2001-754217	A2	20010105
US 2001-269887P	P	20010221
US 2001-329746P	P	20011018
US 2001-29184	A2	20011228
US 2002-363885P	P	20020314
US 2002-187903	A	20020703
WO 2003-US7938	W	20030314

AB Compns. and methods for determining the presence or concentration of glucose in a

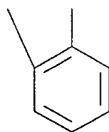
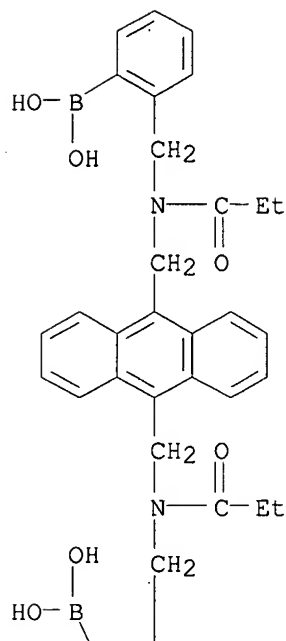
sample which may also contain an alpha-hydroxy acid or a beta-diketone. The method uses a compound having at least two recognition elements for glucose, oriented such that the interaction between the compound and glucose is more stable than the interaction between the compound and the alpha-hydroxy acid or beta-diketone, such that the presence of the alpha-hydroxy acid or the beta-diketone does not substantially interfere with said determination

IT 441011-77-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(detection of glucose in solns. also containing alpha-hydroxy acid or a beta-diketone)

RN 441011-77-4 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene[(1-oxopropyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:262842 CAPLUS

DOCUMENT NUMBER: 139:100891

TITLE: Boronate derivatives of bioactive amines: potential neutral receptors for anionic oligosaccharides

AUTHOR(S): Gray, Charles W.; Walker, Brian T.; Foley, Robin A.; Houston, Todd A.

CORPORATE SOURCE: Department of Chemistry, Virginia Commonwealth University, Richmond, VA, 23284-2006, USA

SOURCE: Tetrahedron Letters (2003), 44(16), 3309-3312

CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:100891

AB Oligomeric  $\delta$ -aminoboronates were synthesized via reductive amination of o-formylbenzene boronic acid with several polyamines. The process entails the direct addition of o-formylbenzene boronic acid to the polyamine in methanol at room temperature followed by reduction of the resulting imine with

NaBH<sub>4</sub>. Di-, tri-, and tetrameric  $\delta$ -aminoboronates have been prepared in this manner and these are anticipated to have enhanced affinities for certain oligosaccharides. A novel templating method for the synthesis of

these compds. is also described.

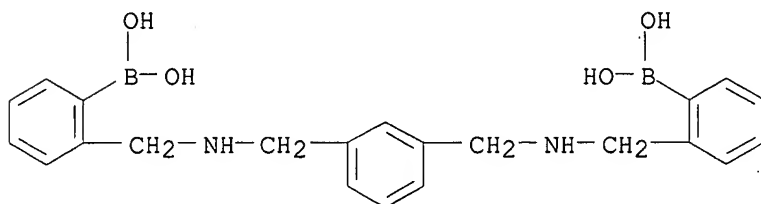
IT 561052-58-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of neutral receptors for anionic oligosaccharides using boronate derivs. of bioactive amines)

RN 561052-58-2 CAPLUS

CN Boronic acid, [1,3-phenylenebis(methyleneiminomethylene-2,1-phenylene)]bis-(9CI) (CA INDEX NAME)



REFERENCE COUNT:

44

THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:696548 CAPLUS

DOCUMENT NUMBER: 137:181947

TITLE: Detection of glucose in solutions also containing an alpha-hydroxy acid or a beta-diketone

INVENTOR(S): Daniloff, George Y.; Kalivretenos, Aristotle G.; Nikolaitchik, Alexandre V.

PATENT ASSIGNEE(S): Sensors for Medicine and Science, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 34 pp., Cont.-in-part of U.S. Ser. No. 754,217.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002127626	A1	20020912	US 2001-29184	20011228
US 2002090734	A1	20020711	US 2001-754217	20010105
CA 2433863	A1	20020725	CA 2002-2433863	20020104
WO 2002057788	A2	20020725	WO 2002-US199	20020104
WO 2002057788	A3	20031127		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1388014	A2	20040211	EP 2002-713356	20020104
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1513117	A	20040714	CN 2002-806012	20020104
JP 2005500512	T	20050106	JP 2002-558018	20020104
BR 2002006304	A	20060124	BR 2002-6304	20020104
US 2003082663	A1	20030501	US 2002-187903	20020703
US 6800451	B2	20041005		
US 2005043275	A1	20050224	US 2004-956133	20041004

US 7078554  
PRIORITY APPLN. INFO.:

B2 20060718

US 2001-754217	A2 20010105
US 2001-269887P	P 20010221
US 2001-329746P	P 20011018
US 2001-29184	A 20011228
WO 2002-US199	W 20020104
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US 2002-187903	A3 20020703

OTHER SOURCE(S): MARPAT 137:181947

AB The invention concerns compns. and methods for determining the presence or concentration of glucose in a sample which may also contain an alpha-hydroxy acid

or a beta-diketone. The method uses a compound having at least two recognition elements for glucose, oriented such that the interaction between the compound and glucose is more stable than the interaction between the compound and the alpha-hydroxy acid or beta-diketone, such that the presence of the alpha-hydroxy acid or the beta-diketone does not substantially interfere with said determination

IT 443290-73-1P, Boronic acid, [9,10-anthracenediylbis[methylene[(5-aminopentyl)imino]methylene-2,1-phenylene]]bis-, bis(trifluoroacetate)

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(detection of glucose in solns. also containing alpha-hydroxy acid or a beta-diketone)

RN 443290-73-1 CAPLUS

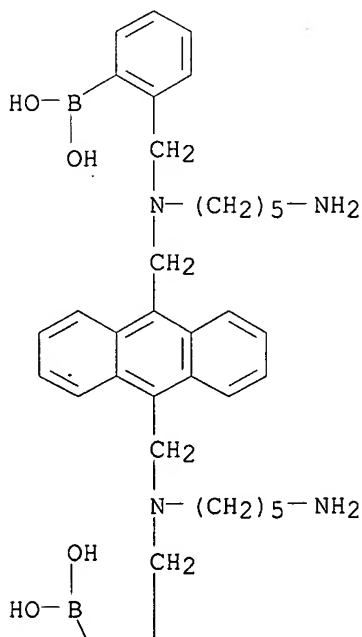
CN Boronic acid, [9,10-anthracenediylbis[methylene[(5-aminopentyl)imino]methylene-2,1-phenylene]]bis-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

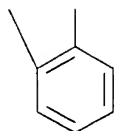
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CRN 443290-72-0

CMF C40 H52 B2 N4 O4

PAGE 1-A

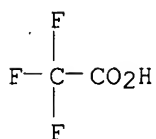




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CRN 76-05-1

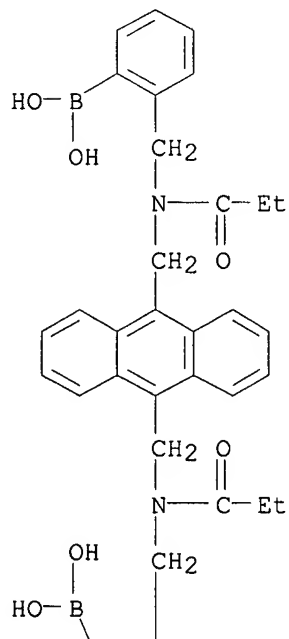
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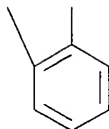
IT 441011-77-4P, Boronic acid, [9,10-anthracenediylbis[methylene[(1-oxopropyl)imino]methylene-2,1-phenylene]]bis-  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (detection of glucose in solns. also containing alpha-hydroxy acid or a beta-diketone)

RN 441011-77-4 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene[(1-oxopropyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)







L4 ANSWER 18 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:555763 CAPLUS  
 DOCUMENT NUMBER: 137:106086  
 TITLE: Detection of glucose in solutions also containing an  
 alpha-hydroxy acid or a beta-diketone  
 INVENTOR(S): Danilooff, George Y.; Kalivrentenos, Aristotle G.;  
 Nikolaitchik, Alexandre V.  
 PATENT ASSIGNEE(S): Sensors for Medicine and Science, Inc., USA  
 SOURCE: PCT Int. Appl., 83 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002057788	A2	20020725	WO 2002-US199	20020104
WO 2002057788	A3	20031127		
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RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
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US 2002127626	A1	20020912	US 2001-29184	20011228
CA 2433863	A1	20020725	CA 2002-2433863	20020104
EP 1388014	A2	20040211	EP 2002-713356	20020104
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2005500512	T	20050106	JP 2002-558018	20020104
BR 2002006304	A	20060124	BR 2002-6304	20020104
PRIORITY APPLN. INFO.:			US 2001-754217	A 20010105
			US 2001-269887P	P 20010221
			US 2001-329746P	P 20011018
			US 2001-29184	A 20011228
			WO 2002-US199	W 20020104

OTHER SOURCE(S): MARPAT 137:106086

AB The invention concerns compns. and methods for determining the presence or concentration of glucose in a sample which may also contain an alpha-hydroxy acid

or a beta-diketone. The method uses a compound having at least two recognition elements for glucose, oriented such that the interaction between the compound and glucose is more stable than the interaction between the compound and the alpha-hydroxy acid or beta-diketone, such that the presence of the alpha-hydroxy acid or the beta-diketone does not substantially interfere with said determination

IT 443290-73-1P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)

(detection of glucose in solns. also containing alpha-hydroxy acid or a beta-diketone)

RN 443290-73-1 CAPLUS

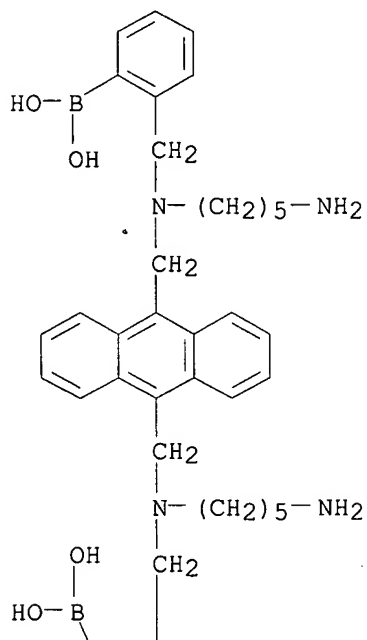
CN Boronic acid, [9,10-anthracenediylbis[methylene[(5-aminopentyl)imino]methylene-2,1-phenylene]]bis-, bis(trifluoroacetate)  
(9CI) (CA INDEX NAME)

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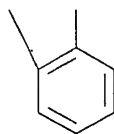
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CMF C40 H52 B2 N4 O4

PAGE 1-A



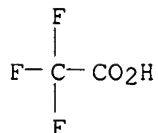
PAGE 2-A



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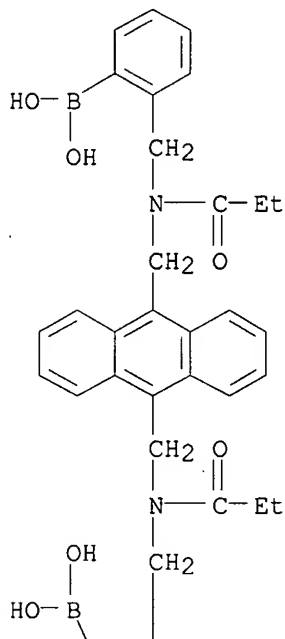
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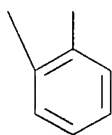


IT 441011-77-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (detection of glucose in solns. also containing alpha-hydroxy acid or a  
 beta-diketone)  
 RN 441011-77-4 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[(1-  
 oxopropyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



L4 ANSWER 19 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:522549 CAPLUS  
 DOCUMENT NUMBER: 137:90594  
 TITLE: Detection of glucose in solutions also containing an  
 alpha-hydroxy acid or a beta-diketone  
 INVENTOR(S): Daniloff, George Y.; Kalivretenos, Aristotle G.;  
 Nikolaitchik, Alexandre V.  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 21 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2002090734	A1	20020711	US 2001-754217	20010105
US 2002127626	A1	20020912	US 2001-29184	20011228
CA 2433863	A1	20020725	CA 2002-2433863	20020104
WO 2002057788	A2	20020725	WO 2002-US199	20020104
WO 2002057788	A3	20031127		

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1388014	A2	20040211	EP 2002-713356	20020104
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1513117	A	20040714	CN 2002-806012	20020104
JP 2005500512	T	20050106	JP 2002-558018	20020104
BR 2002006304	A	20060124	BR 2002-6304	20020104
US 2003082663	A1	20030501	US 2002-187903	20020703
US 6800451	B2	20041005		
US 2005043275	A1	20050224	US 2004-956133	20041004
US 7078554	B2	20060718		

PRIORITY APPLN. INFO.:

US 2001-754217	A2	20010105
US 2001-269887P	P	20010221
US 2001-329746P	P	20011018
US 2001-29184	A	20011228
WO 2002-US199	W	20020104
US 2002-363885P	P	20020314
US 2002-187903	A3	20020703

OTHER SOURCE(S): MARPAT 137:90594

AB Comps. and methods for determining the presence or concentration of glucose in a

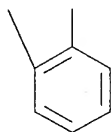
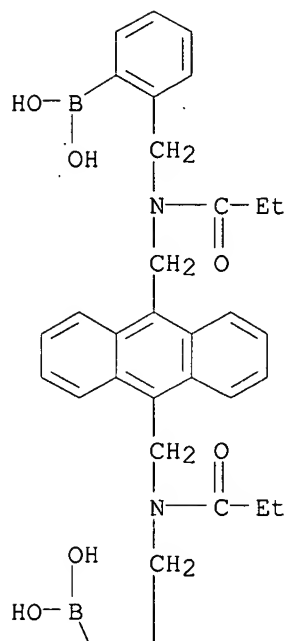
sample which may also contain an alpha-hydroxy acid or a beta-diketone. The method uses a compound having at least two recognition elements for glucose, oriented such that the interaction between the compound and glucose is more stable than the interaction between the compound and the alpha-hydroxy acid or beta-diketone, such that the presence of the alpha-hydroxy acid or the beta-diketone does not substantially interfere with said determination

IT 441011-77-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(detection of glucose in solns. also containing alpha-hydroxy acid or a beta-diketone)

RN 441011-77-4 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene[(1-oxopropyl)imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



L4 ANSWER 20 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:522152 CAPLUS  
 DOCUMENT NUMBER: 137:75531  
 TITLE: Detection of analytes  
 INVENTOR(S): Daniloff, George Y.; Kalivrentenos, Aristotle G.;  
 Nikolaitschik, Alexandre V.; Ullman, Edwin F.  
 PATENT ASSIGNEE(S): Sensors for Medicine and Science, Inc., USA  
 SOURCE: PCT Int. Appl., 81 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002054067	A2	20020711	WO 2002-US201	20020104
WO 2002054067	A3	20030522		

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 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, UZ, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,

KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB,  
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 GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2002094586	A1	20020718	US 2001-754219	20010105
US 2002119581	A1	20020829	US 2001-28331	20011228
CA 2433904	A1	20020711	CA 2002-2433904	20020104
EP 1350102	A2	20031008	EP 2002-714690	20020104

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2004528537	T	20040916	JP 2002-554715	20020104
BR 2002006318	A	20060124	BR 2002-6318	20020104

PRIORITY APPLN. INFO.:  
 US 2001-754219 A 20010105  
 US 2001-28331 A 20011228  
 WO 2002-US201 W 20020104

AB Disclosed are methods for detecting analytes, such as sugars, indicator systems which may undergo a mol. configurational change upon exposure to the analyte. The configurational change affects a detectable quality, such as fluorescence associated with the indicator system, thereby allowing detection of the presence or concentration of the analyte.

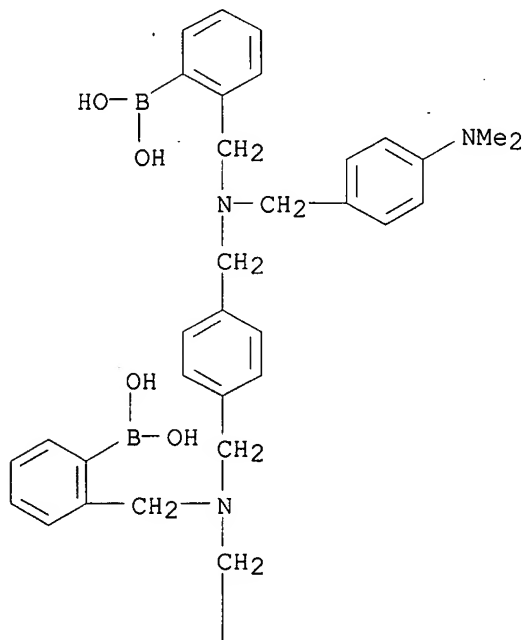
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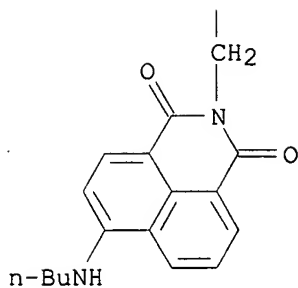
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)  
 (detection of analytes)

RN 440665-91-8 CAPLUS

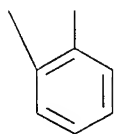
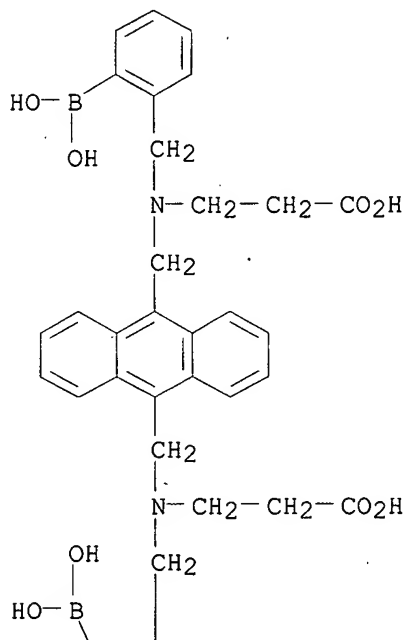
CN Boronic acid, [2-[[[4-[[[(2-boronophenyl)methyl][2-[6-(butylamino)-1,3-dioxo-1H-benz[de]isoquinolin-2(3H)-yl]ethyl]amino]methyl]phenyl]methyl][4-(dimethylamino)phenyl]methyl]amino]methyl]phenyl]- (9CI) (CA INDEX NAME)

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RN 440666-20-6 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-[9,10-anthracenediylbis(methylene)]bis[N-[(2-boronophenyl)methyl]- (9CI) (CA INDEX NAME)

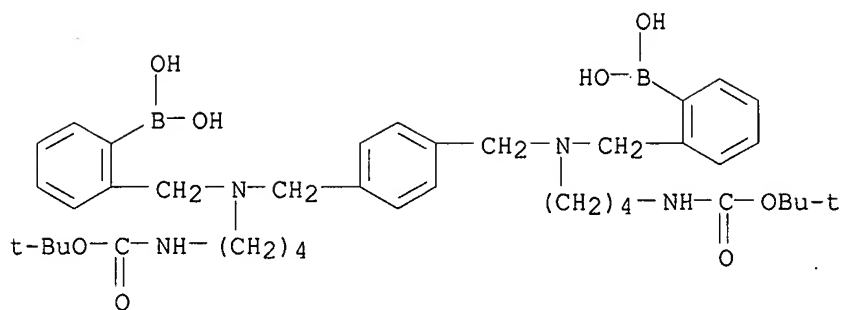


RN 440666-24-0 CAPLUS  
 CN Carbamic acid, [1,4-phenylenebis[methylene[[ (2-boronophenyl)methyl]imino]-4,1-butanediyl]]bis-, C,C'-bis(1,1-dimethylethyl) ester, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

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CRN 440666-23-9

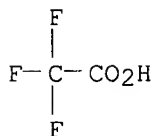
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CM 2

CRN 76-05-1

CMF C2 H F3 O2



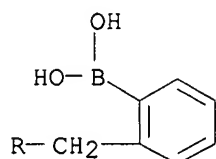
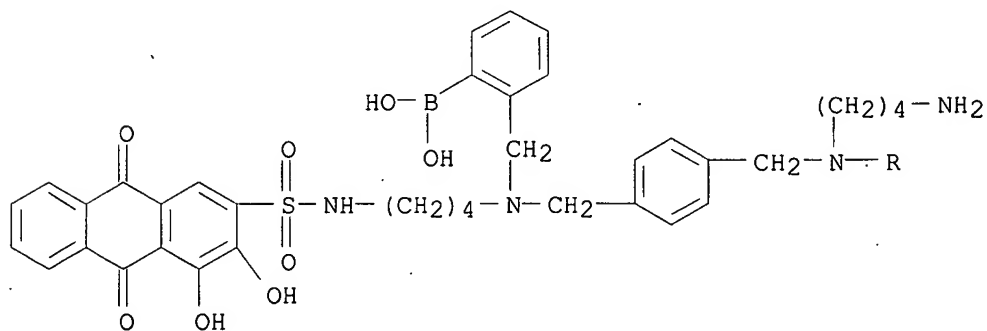
RN 440666-26-2 CAPLUS

CN Boronic acid, [2-[[[4-[[4-(aminobutyl)[(2-boronophenyl)methyl]amino]methyl]phenyl]methyl][4-[[9,10-dihydro-3,4-dihydroxy-9,10-dioxo-2-anthracenyl)sulfonyl]amino]butyl]amino]methyl]phenyl]-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 440666-25-1

CMF C44 H50 B2 N4 O10 S

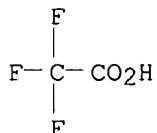




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CRN 76-05-1

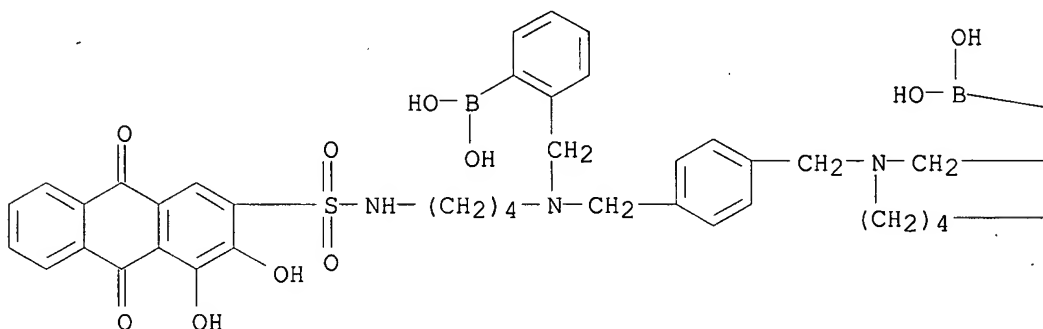
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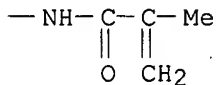
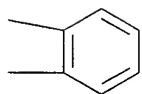
RN 440666-27-3 CAPLUS

CN Boronic acid, [2-[[[4-[[[(2-boronophenyl)methyl][4-[[[(9,10-dihydro-3,4-dihydroxy-9,10-dioxo-2-anthracenyl)sulfonyl]amino]butyl]amino]methyl]phenyl]methyl][4-[(2-methyl-1-oxo-2-propenyl)amino]butyl]amino]methyl]phenyl]-(9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L4 ANSWER 21 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:256773 CAPLUS

DOCUMENT NUMBER: 136:291357

TITLE: Detection of analytes in aqueous environments

INVENTOR(S): Colvin, Arthur E.

PATENT ASSIGNEE(S): Sensors for Medicine and Science, Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U. S.

Ser. No. 632,624.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002039793	A1	20020404	US 2001-920627	20010803
US 6794195	B2	20040921		
EP 1557422	A2	20050727	EP 2004-78499	20010803
EP 1557422	A3	20060705		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
US 2003003592	A1	20030102	US 2002-193246	20020712
US 2003008408	A1	20030109	US 2002-193244	20020712
US 2003013204	A1	20030116	US 2002-193245	20020712
US 2003013202	A1	20030116	US 2002-193249	20020712
US 2004229370	A1	20041118	US 2004-788264	20040301
US 7060503	B2	20060613		
US 2006281185	A1	20061214	US 2006-448903	20060608
PRIORITY APPLN. INFO.:				US 2000-632624 A2 20000804
				EP 2001-956112 A3 20010803
				US 2001-920627 A1 20010803
				US 2004-788264 A1 20040301

AB The invention concerns indicator mols. for detecting the presence or concentration of an analyte in a medium, such as a liquid, and to methods for achieving such detection. More particularly, the invention relates to copolymer macromols. containing relatively hydrophobic indicator component monomers, and hydrophilic monomers, such that the macromol. is capable of use in an aqueous environment.

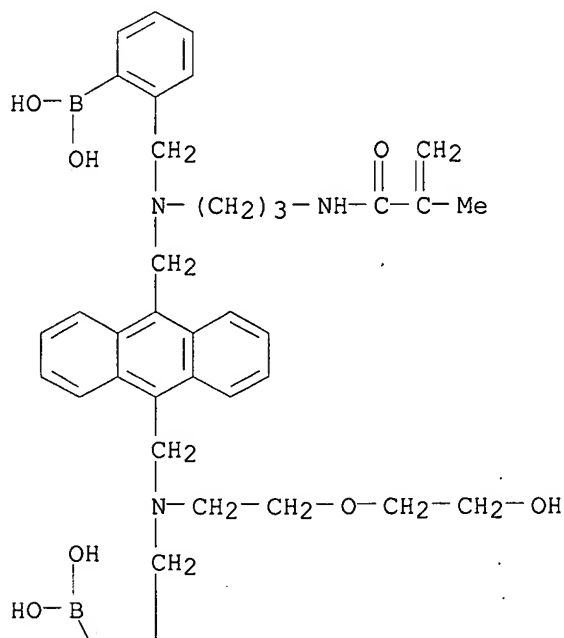
IT 408306-38-7P 408306-39-8P 408306-40-1P  
408306-41-2P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)  
(detection of analytes in aqueous environments)

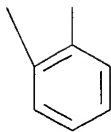
RN 408306-38-7 CAPLUS

CN Boronic acid, [2-[[[10-[[[(2-boronophenyl)methyl][2-(2-hydroxyethoxy)ethyl]amino]methyl]-9-anthracenyl]methyl][3-[(2-methyl-1-oxo-2-propenyl)amino]propyl]amino]methyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

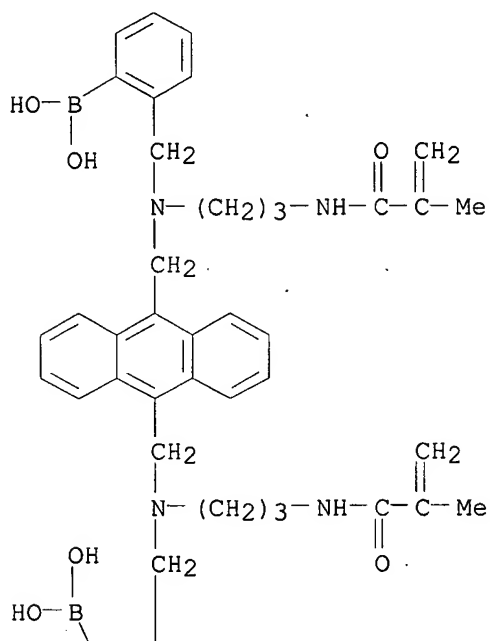


PAGE 2-A

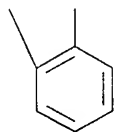


RN 408306-39-8 CAPLUS  
CN Boronic acid, [9,10-anthracenediylbis[methylene[[3-[(2-methyl-1-oxo-2-propenyl)amino]propyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

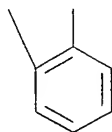
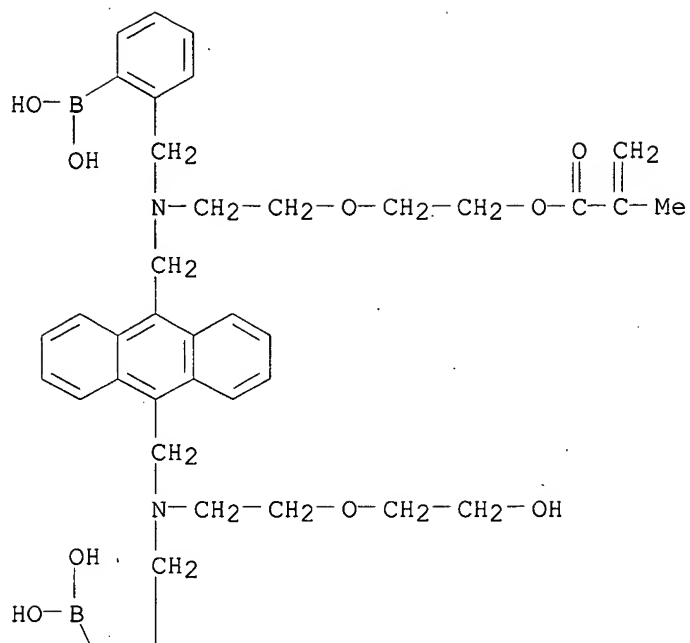
PAGE 1-A



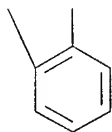
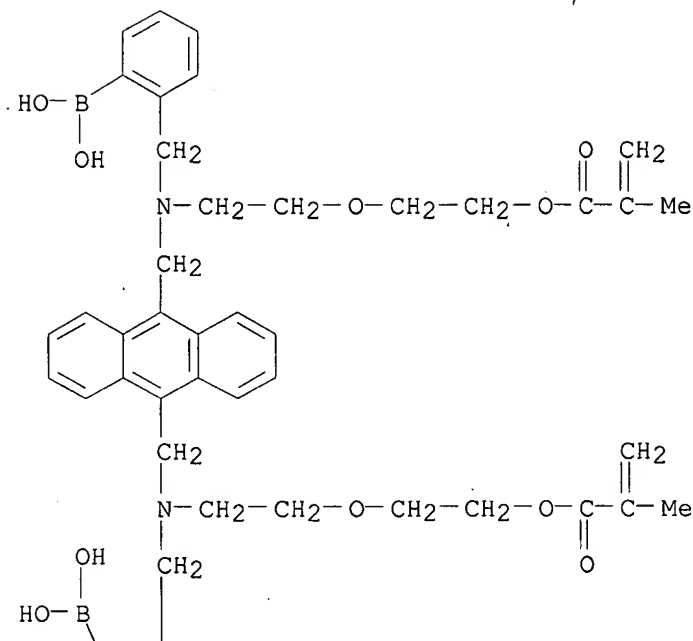
PAGE 2-A



RN 408306-40-1 CAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-[2-[[[(2-boronophenyl)methyl][[10-[[[(2-boronophenyl)methyl][2-(2-hydroxyethoxy)ethyl]amino]methyl]-9-anthracenyl]methyl]amino]ethoxy]ethyl ester (9CI) (CA INDEX NAME)



RN 408306-41-2 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[[2-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]ethyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 22 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:134552 CAPLUS

DOCUMENT NUMBER: 136:321497

TITLE: Rhenium bipyridine complexes for the recognition of glucose

AUTHOR(S): Cary, Douglas R.; Zaitseva, Natasha P.; Gray, Kelsey; O'Day, Kira E.; Darrow, Christopher B.; Lane, Stephen M.; Peyser, Thomas A.; Satcher, Joe H., Jr.; Van Antwerp, William P.; Nelson, A. J.; Reynolds, John G.

CORPORATE SOURCE: University of California, Lawrence Livermore National Laboratory, Livermore, CA, 94551, USA

SOURCE: Inorganic Chemistry (2002), 41(6), 1662-1669

CODEN: INOCAJ; ISSN: 0020-1669

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Bipyridine ligands containing pendant Me, amino, and amino-boronic acid groups were synthesized. Coordination complexes of these ligands with rhenium were prepared straightforwardly and in good yield. The fluorescence behavior of the Re complexes was studied as a function of pH and exposure to various concns. of glucose. The Me bipyridine complex showed no change in fluorescence with pH, the amino derivative showed a rapid decrease from low pH to neutral, and the amino-boronate derivative showed little change from pH

4 to 10. Fluorescence quenching was observed at high pH as expected on the basis of a photoinduced electron transfer (PET) signaling mechanism. This behavior can be explained on the basis of the first oxidation and reduction potentials of these complexes. Glucose testing showed a significant dependence on the solvent system used. In pure methanol, the rhenium boronate complex exhibited a 55% fluorescence intensity increase upon increasing glucose concentration from 0 to 400 mg/dL. However, in 50 vol % methanol/phosphate buffered saline, none of the complexes showed significant response in the glucose range of physiol. interest.

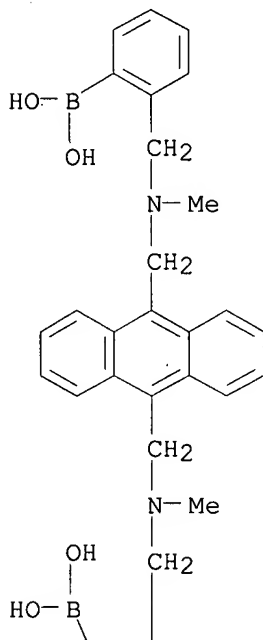
IT 162254-07-1P

RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)  
(rhenium bipyridine complexes for recognition of glucose)

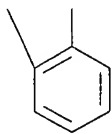
RN 162254-07-1 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

PAGE 1-A



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REFERENCE COUNT:

47

THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 23 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:133647 CAPLUS

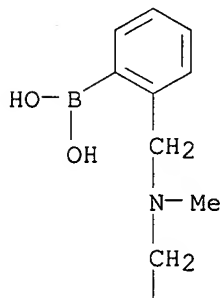
DOCUMENT NUMBER: 136:369754

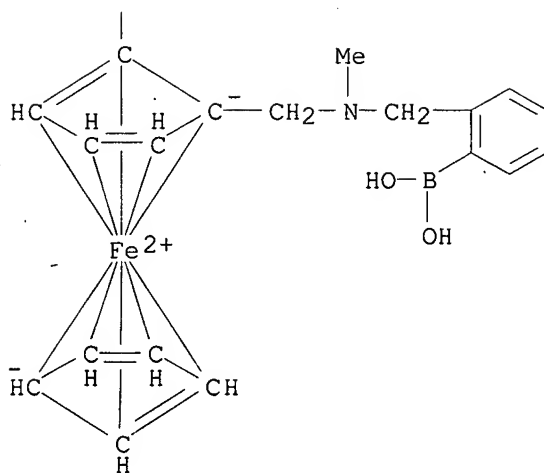
TITLE: Design, synthesis and structure of new potential electrochemically active boronic acid-based glucose

sensors  
 AUTHOR(S): Norrild, Jens Chr.; Sotofte, Inger  
 CORPORATE SOURCE: Department of Chemistry, Laboratory for General and Organic Chemistry, University of Copenhagen, Copenhagen, DK-2100, Den.  
 SOURCE: Journal of the Chemical Society, Perkin Transactions 2 (2002), (2), 303-311  
 CODEN: JCSPGI; ISSN: 1472-779X  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 136:369754

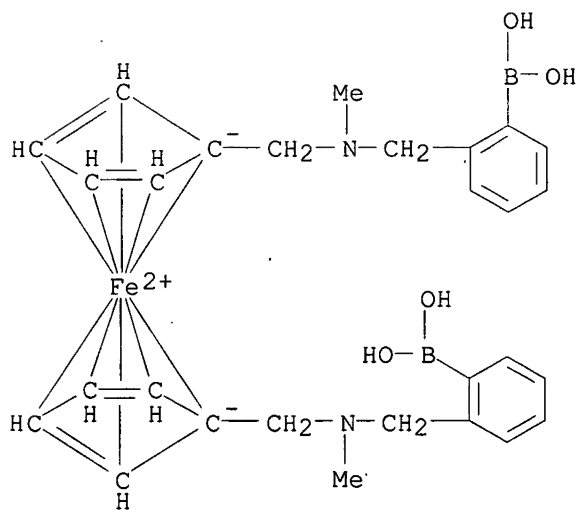
AB In the authors' studies on new boronic acid based carbohydrate sensors three new boronic acids (2-FcCH<sub>2</sub>NMeCH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>B(OH)<sub>2</sub> (3), 1,2-(2-(HO)<sub>2</sub>BC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>NMeCH<sub>2</sub>)<sub>2</sub>ferrocene (7) and 1,1'-(2-(HO)<sub>2</sub>BC<sub>6</sub>H<sub>4</sub>CH<sub>2</sub>NMeCH<sub>2</sub>)<sub>2</sub>ferrocene (11)) containing a ferrocene moiety were synthesized. Their design includes an intramol. B-N bonding motif to facilitate binding at physiol. pH. The authors report the synthesis of the compds. and studies on glucose complexation as studied by <sup>13</sup>C NMR spectroscopy. The crystal structure of 2,4,6-tris[2-(N-ferrocenylmethyl-N-methylaminomethyl)phenyl]boroxin (13) (boroxin of boronic acid 3) (boroxin = cyclotriboroxane) was obtained and compared with structures obtained of 2,4,6-tris[2-(N,N-dimethylaminomethyl)phenyl]boroxin (14) and 2-(2-(dimethylaminomethyl)phenyl)-5,5-dimethyl-1,3,2-dioxaborinane (15). The structure of 13 shows the existence of intramol. B-N bonds in the solid phase.  
 IT 423761-32-4DP, 1,2-Bis(((2-(dihydroxyboryl)benzyl)(methyl)amino)methyl)ferrocene, reaction products with glucose 423761-35-7DP, 1,1'-Bis(((2-(dihydroxyboryl)benzyl)(methyl)amino)methyl)ferrocene, reaction products with glucose  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
 RN 423761-32-4 CAPLUS  
 CN Ferrocene, 1,2-bis[[(2-boronophenyl)methyl)methylamino)methyl]- (9CI) (CA INDEX NAME)

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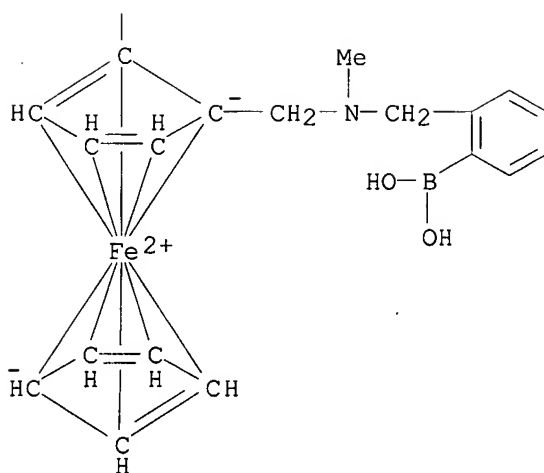
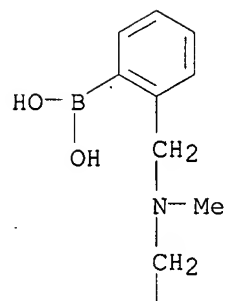


RN 423761-35-7 CAPLUS  
 CN Ferrocene, 1,1'-bis[[(2-boronophenyl)methyl]methylamino]methyl]- (9CI)  
 (CA INDEX NAME)

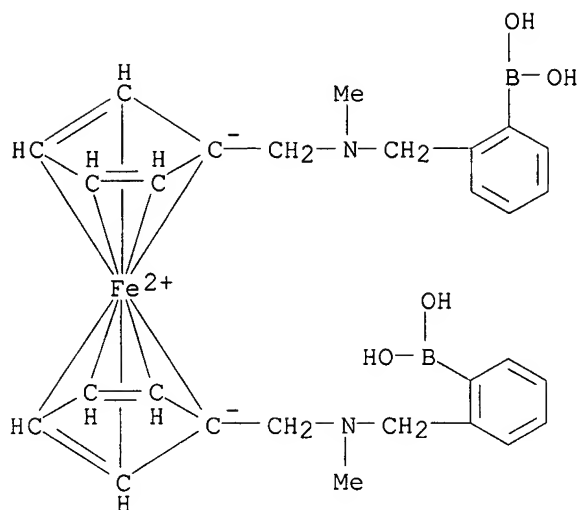


IT 423761-32-4P, 1,2-Bis(((2-(dihydroxyboryl)benzyl) (methyl)amino)methyl)ferrocene 423761-35-7P, 1,1'-Bis(((2-(dihydroxyboryl)benzyl) (methyl)amino)methyl)ferrocene  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation, electrochem. redox, and reaction with glucose)  
 RN 423761-32-4 CAPLUS  
 CN Ferrocene, 1,2-bis[[(2-boronophenyl)methyl]methylamino]methyl]- (9CI)  
 (CA INDEX NAME)





RN 423761-35-7 CAPLUS  
 CN Ferrocene, 1,1'-bis[[(2-boronophenyl)methyl]methylamino]methyl]- (9CI)  
 (CA INDEX NAME)



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 24 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:497867 CAPLUS

DOCUMENT NUMBER: 135:223593

TITLE: Evaluation of two synthetic glucose probes for fluorescence-lifetime-based sensing

AUTHOR(S): DiCesare, Nicolas; Lakowicz, Joseph R.

CORPORATE SOURCE: Center for Fluorescence Spectroscopy, Department of Biochemistry and Molecular Biology, University of Maryland at Baltimore, Baltimore, MD, 21201, USA

SOURCE: Analytical Biochemistry (2001), 294(2), 154-160  
CODEN: ANBCA2; ISSN: 0003-2697

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

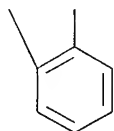
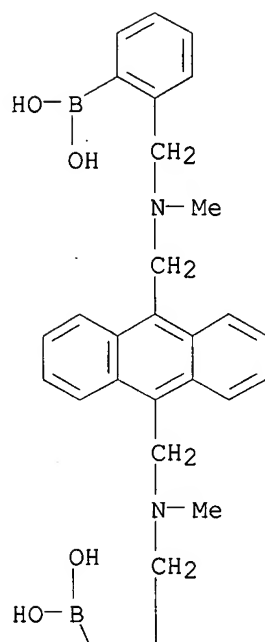
AB We evaluated two anthracene derivs. with covalently attached boronic acid groups for fluorescence-lifetime-based sensing of glucose. These anthracene derivs. also contained alkyl amino groups, which quenched the anthracene emission by photo-induced electron transfer. Both anthracene derivs. displayed increased intensities and lifetime in the presence of glucose, as seen from the frequency-domain measurements. A fluorescence lifetime change from 9.8 to 12.4 and 5.7 to 11.8 ns is observed, after the addition of glucose, for the anthracene substituted with one and two boronic acid groups, resp. This results in a change in the phase angle up to 15° and 30° and in the modulation up to 12 and 25% at 30 MHz for these compds., resp. Titration curves in the presence of BSA and micelles are also presented to show the potential interferences from biomols. Dissociation consts. were evaluated for both compds., and association with glucose was found to be reversible. Importantly, the apparent glucose binding consts. are about 5- to 10-fold smaller with phase, modulation, or mean lifetime than with intensities measurements, shifting the glucose-sensitive range to physiol. values. Combining these results and the use of a simple UV-LED as excitation source, the results show an interesting potential of these two compds. in the development of lifetime base devices using synthetic probes for glucose. (c) 2001 Academic Press.

IT 162254-07-1

RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
(synthetic glucose probes for fluorescence-lifetime-based sensing)

RN 162254-07-1 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 25 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2001:186026 CAPLUS  
 DOCUMENT NUMBER: 134:219381  
 TITLE: Minimally invasive methods for measuring analytes in vivo  
 INVENTOR(S): Bell, Michael L.; McNeal, Jack D.  
 PATENT ASSIGNEE(S): Beckman Coulter, Inc., USA  
 SOURCE: PCT Int. Appl., 21 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001018543	A1	20010315	WO 2000-US24438	20000906
W: JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6366793	B1	20020402	US 1999-393738	19990910
EP 1129353	A1	20010905	EP 2000-959941	20000906

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, FI

JP 2003508186 T 20030304 JP 2001-522081 20000906  
PRIORITY APPLN. INFO.: US 1999-393738 A 19990910  
WO 2000-US24438 W 20000906

AB Minimally invasive methods for measuring an analyte, such as glucose, contained in the interstitial fluid of a body are provided. The methods include the steps of: (a) providing at least one sensor particle capable of generating a detectable analyte signal in responding to the analyte concentration of the body, (b) placing the sensor particle into the skin of the body for allowing the sensor particle to be in contact with the interstitial fluid of the body to generate the detectable analyte signal, (c) detecting the generated analyte signal, and (d) determining the concentration of

the analyte contained in the interstitial fluid. The sensor particles may be made to be responsive to an analyte such as glucose concentration contained in

a body fluid by including a photo-induced electron transfer receptor specific for the analyte in the sensor particle.

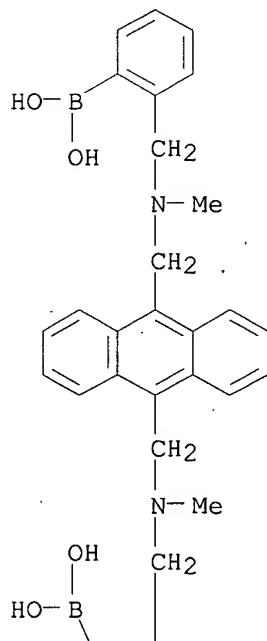
IT 162254-07-1

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
(minimally invasive methods for measuring analytes in vivo)

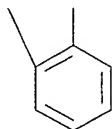
RN 162254-07-1 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

PAGE 1-A



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REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 26 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:334502 CAPLUS

DOCUMENT NUMBER: 125:80937

TITLE: Molecular design of artificial sugar sensing systems

AUTHOR(S): Shinkai, Seiji; Takeuchi, Makayuki

CORPORATE SOURCE: Professor Chem. Dep. Chem. Sci. Technol., Faculty Eng., Kyushu Univ., Fukuoka, 812, Japan

SOURCE: TrAC, Trends in Analytical Chemistry (1996), 15(5), 188-194

CODEN: TTAEDJ; ISSN: 0165-9936

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

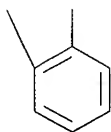
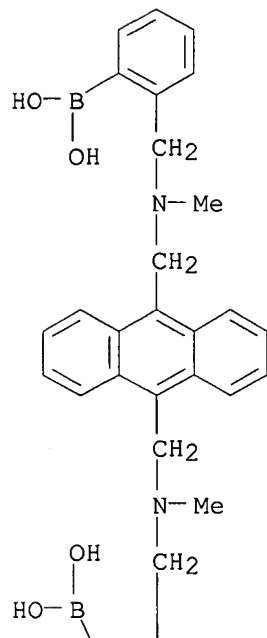
AB For the development of new receptor mols. that can precisely recognize sugar mols., we synthesized a number of diboronic acids. Since one boronic acid can react with two OH groups (one diol group) to form a boronate ester, one diboronic acid can immobilize two diol units to form a sugar-containing macrocycle. The selectivity can be tuned by the relative spatial position of the two boronic acids and the complexation event can be read out by CD spectroscopy. When a boronic acid group is combined intramolecularly with an aminomethyl fluorophore, the complexation event can be conveniently read out by fluorescence spectroscopy. This is a novel application of a PET (photoinduced electron transfer) sensor: the sugar-binding changes the strength of the B...N interaction, which eventually changes the fluorescence quenching efficiency of the amine. We demonstrated, by using a chiral 1,1'-binaphthyl group as a fluorophore, that even chiral recognition of sugars is possible. These abundant examples support the superiority of boronic-acid-based covalent bond recognition over hydrogen-bond-based noncovalent bond recognition for sugars in water.

IT 162254-07-1

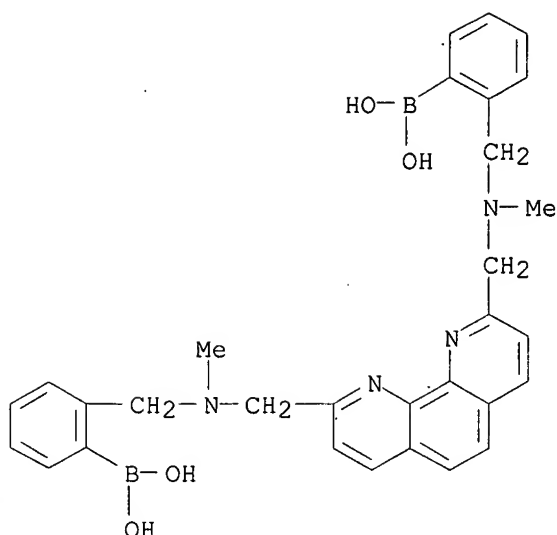
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (mol. design of artificial sugar sensing systems)

RN 162254-07-1 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



L4 ANSWER 27 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1995:968850 CAPLUS  
 DOCUMENT NUMBER: 124:81128  
 TITLE: A sweet toothed saccharide (PET) sensor  
 AUTHOR(S): Linnane, Patrick; James, Tony D.; Imazu, Sachiko;  
 Shinkai, Seiji  
 CORPORATE SOURCE: Shinkai Chemirecognics Project, ERATO, Kurume, 830,  
 Japan  
 SOURCE: Tetrahedron Letters (1995), 36(48), 8833-4  
 CODEN: TELEAY; ISSN: 0040-4039  
 PUBLISHER: Elsevier  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB A novel phenanthroline diboronic acid has been synthesized which can  
 detect a range of saccharides at neutral pH in aqueous media. The binding  
 events are sensitively monitored by changes in the fluorescence intensity.  
 IT 172665-47-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (a sweet toothed saccharide (PET) sensor)  
 RN 172665-47-3 CAPLUS  
 CN Boronic acid, [1,10-phenanthroline-2,9-diylbis[methylene(methylimino)methy  
 lene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



L4 ANSWER 28 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1995:878895 CAPLUS  
 DOCUMENT NUMBER: 123:280304  
 TITLE: Fluorescent phenylboronic acids for detection of saccharides  
 INVENTOR(S): James, Tony; Sandanayake, Saman; Shinkai, Seiji  
 PATENT ASSIGNEE(S): Research Development Corporation of Japan, Japan  
 SOURCE: Brit. UK Pat. Appl., 24 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2284809	A	19950621	GB 1994-22327	19941104
GB 2284809	B	19980429		
JP 08053467	A	19960227	JP 1994-293879	19941101
JP 2883824	B2	19990419		
US 5503770	A	19960402	US 1994-336236	19941107
DE 4439783	A1	19980507	DE 1994-4439783	19941107
DE 4439783	C2	20020808		
PRIORITY APPLN. INFO.:			JP 1993-302385	A 19931107
			JP 1994-147061	A 19940606

OTHER SOURCE(S): MARPAT 123:280304

GI For diagram(s), see printed CA Issue.

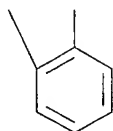
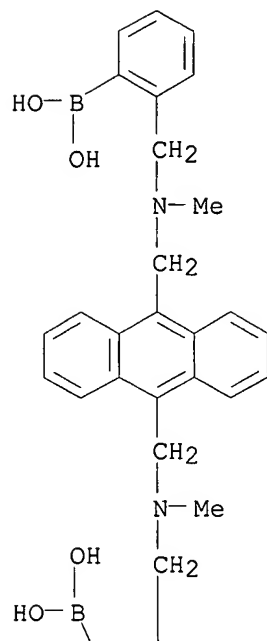
AB Fluorophore I (R1 = aryl, preferably anthryl; R2 = alkyl, aryl; m, n = 0-2), in which an amino N atom can interact intramolecularly with the boronic acid, emits high-intensity fluorescence upon binding to saccharide(s), and is therefore suitable for use in the detection of saccharide(s). Thus, o-tolylmagnesium bromide reacted with tri-Me borate to form o-tolylboronic anhydride, which was brominated on the Me group with N-bromosuccinimide and refluxed with 9-(methylamino)methylanthracene to form I (R1 = 9-anthryl, R2 = Me) (II). An aqueous solution of II fluoresced intensely in the presence of glucose or fructose.

IT 162254-07-1

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (fluorescent phenylboronic acids for detection of saccharides)

RN 162254-07-1 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



L4 ANSWER 29 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:863277 CAPLUS

DOCUMENT NUMBER: 124:87524

TITLE: The synthesis and properties of a calixarene-based 'sugar bowl'

AUTHOR(S): Linnane, Patrick; James, Tony D.; Shinkai, Seiji

CORPORATE SOURCE: CHEMIRECOGNICS Project ERATO, Research Development Corporation Japan, Fukuoka, 830, Japan

SOURCE: Journal of the Chemical Society, Chemical Communications (1995), (19), 1997-8

CODEN: JCCCAT; ISSN: 0022-4936

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A novel calix-diboronic acid has been synthesized which can detect saccharides at neutral pH in aqueous media; the binding events are sensitively monitored by changes in the fluorescence intensity.

IT 172472-57-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis and fluorescence intensity of a calixarene-based sugar bowl)

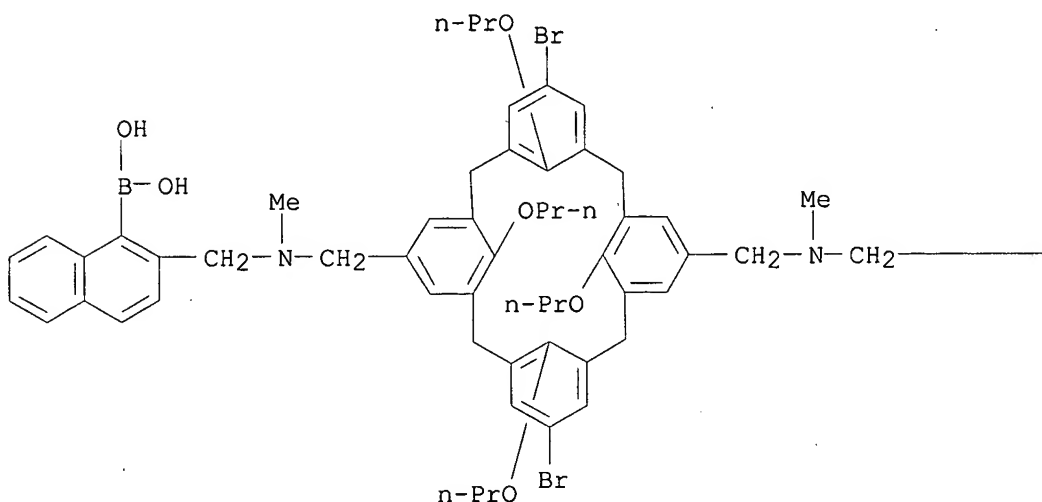
RN 172472-57-0 CAPLUS

CN Boronic acid, [(11,23-dibromo-25,26,27,28-tetrapropoxypentacyclo[19.3.1.13

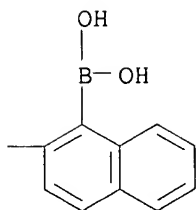


,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-5,17-diyl)bis[methylene(methylimino)methylene-2,1-naphthalenediyl]]bis- (9CI) (CA INDEX NAME)

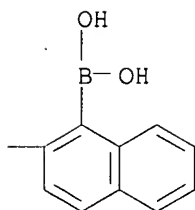
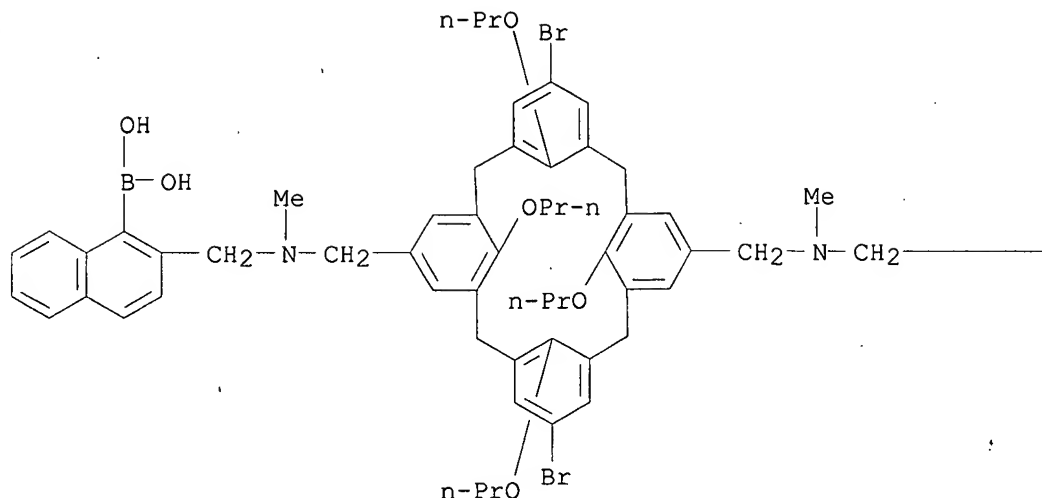
PAGE 1-A



PAGE 1-B



IT 172472-57-0DP, reaction product with D-fructose  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (synthesis and fluorescence intensity of a calixarene-based sugar bowl)  
 RN 172472-57-0 CAPLUS  
 CN Boronic acid, [(11,23-dibromo-25,26,27,28-tetrapropoxypentacyclo[19.3.1.13  
 ,7.19,13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-  
 dodecaene-5,17-diyl)bis[methylene(methylimino)methylene-2,1-  
 naphthalenediyl]]bis- (9CI) (CA INDEX NAME)



L4 ANSWER 30 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1995:751078 CAPLUS  
 DOCUMENT NUMBER: 123:138027  
 TITLE: Novel saccharide-photoinduced electron transfer sensors based on the interaction of boronic acid and amine  
 AUTHOR(S): James, Tony D.; Sandanayake, K. R. A. Samankumara; Iguchi, Ritsuko; Shinkai, Seiji  
 CORPORATE SOURCE: ERATO, Research Development Corporation of Japan, Kurume, 830, Japan  
 SOURCE: Journal of the American Chemical Society (1995), 117(35), 8982-7  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Two boronic acid systems, monoboronic acid 3 and diboronic acid 8, were synthesized. When saccharides form cyclic boronate esters with these boronic acids, the Lewis acid-base interaction between the boronic acid moiety and tertiary amine is strengthened; when saccharides form cyclic boronate esters with boronic acids the acidity of the boronic acid is enhanced. The strength of this acid-base interaction modulates the photoinduced electron transfer (PET) from the amine to anthracene. Both of these compds. show increased fluorescence at pH 7.77 through

suppression of the photoinduced electron transfer from nitrogen to anthracene on saccharide binding, a direct result of the stronger boron-nitrogen bond. Compound 3 shows the typical selectivity of monoboronic acids towards saccharides. Compound 8 which has a cleftlike structure is particularly selective and sensitive for glucose due to the formation of an intramol. 1:1 complex between the two boronic acids and the 1,2- and 4,6-hydroxyls of glucose. This is the first example in which ditopic recognition of monosaccharides is achieved in a PET sensor system.

IT 162254-07-1P

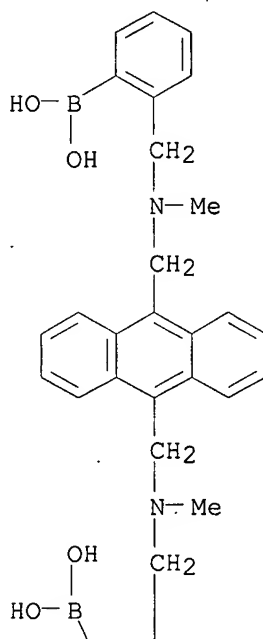
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)

(novel saccharide-photoinduced electron transfer sensors based on interaction of boronic acid and amine)

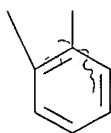
RN 162254-07-1 CAPLUS

CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

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L4 ANSWER 31 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:713232 CAPLUS

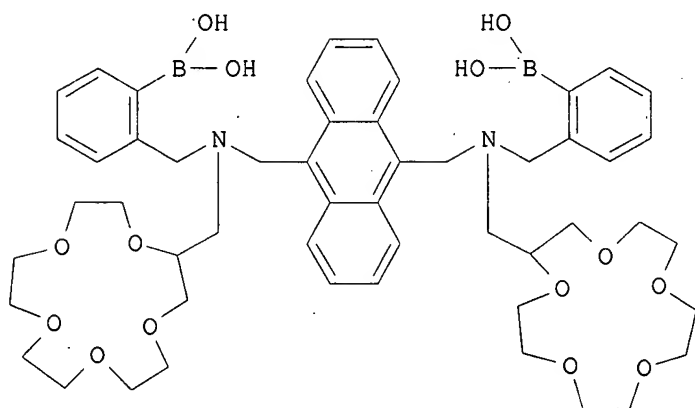
DOCUMENT NUMBER: 123:228252

TITLE: A diboronic acid 'glucose cleft' and a biscrown ether 'metal sandwich' are allosterically coupled

AUTHOR(S): James, Tony D.; Shinkai, Seiji

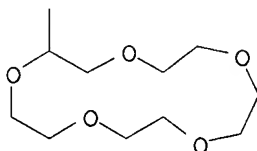
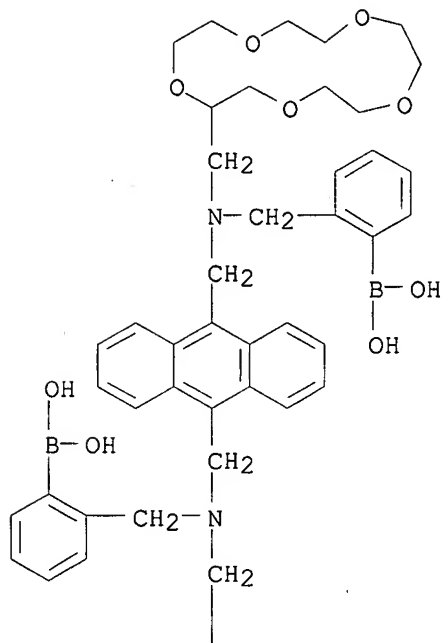
CORPORATE SOURCE: CHEMIRECOGNICS Project, ERATO, Res. Dev. Corp. of

SOURCE: Japan, Kurume, 830, Japan  
 Journal of the Chemical Society, Chemical  
 Communications (1995), (14), 1483-5  
 CODEN: JCCCCAT; ISSN: 0022-4936  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 123:228252  
 GI



I

AB Glucose is released from the diboronic acid 'cleft' I when a metal  
 'sandwich' is formed by two 15-crown-5 rings; the binding events are  
 sensitively monitored by changes in the fluorescence intensity.  
 IT 168558-56-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (a diboronic acid glucose cleft and a biscrown ether metal sandwich are  
 allosterically coupled and monitored by changes in the fluorescence  
 intensity)  
 RN 168558-56-3 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[(2,3,5,6,8,9,11,12,14,15-  
 decahydro-1,4,7,10,13-pentaoxacyclopentadec-2-yl)methyl]imino]methylene-  
 2,1-phenylene]]bis- (9CI) (CA INDEX NAME)



L4 ANSWER 32 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:366466 CAPLUS

DOCUMENT NUMBER: 123:334134

TITLE: A glucose-specific molecular fluorescence sensor

AUTHOR(S): James, Tony D.; Sandanayake, K. R. A. Samankumara; Shinkai, Seiji

CORPORATE SOURCE: Shinkai Chemirecognics Project, ERATO, Aikawa, 2432-3, Japan

SOURCE: Angewandte Chemie (1994), 106(21), 2287-9

CODEN: ANCEAD; ISSN: 0044-8249

PUBLISHER: VCH

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Glucose can be determined in the physiolo. range in blood by fluorometry using as photoinduced electron transfer sensor a 9,10-bis-aminomethylantracene derivative containing 2 boronic acid groups. The 2 boronic acid groups are directed to the 1,2- and 4,6-hydroxy groups of glucose and form a fluorescent cyclic 1:1 complex that was confirmed by NMR.

IT 162254-07-1

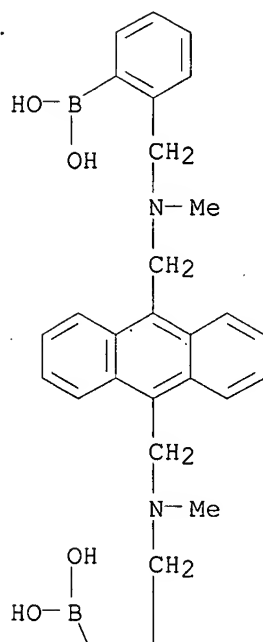
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)  
(glucose-specific mol. fluorescence sensor)

RN 162254-07-1 CAPLUS

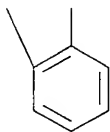
CN Boronic acid, [9,10-anthracenediylbis[methylene(methylimino)methylene-2,1-

phenylene]]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

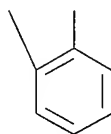
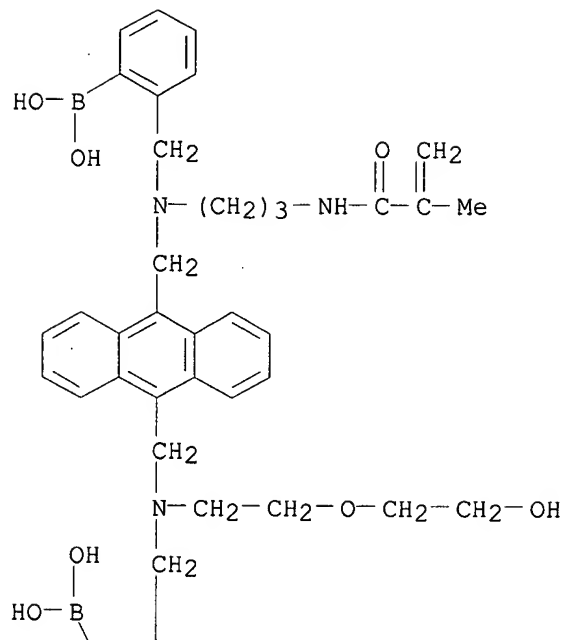


PAGE 2-A



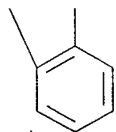
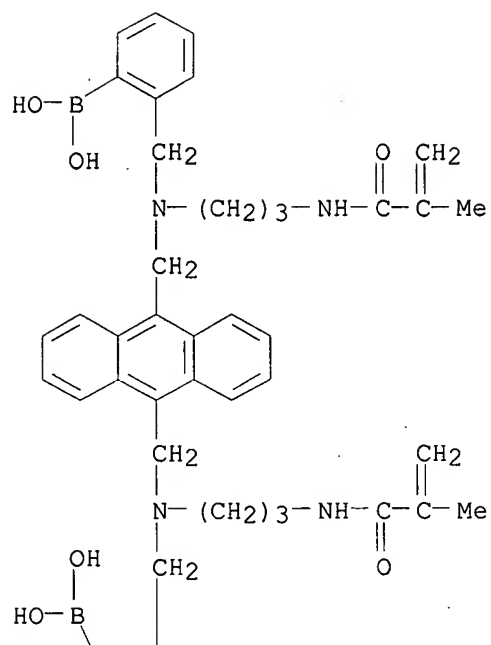
L6 ANSWER 21 OF 32 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:256773 CAPLUS  
 DOCUMENT NUMBER: 136:291357  
 TITLE: Detection of analytes in aqueous environments  
 INVENTOR(S): Colvin, Arthur E.  
 PATENT ASSIGNEE(S): Sensors for Medicine and Science, Inc., USA  
 SOURCE: U.S. Pat. Appl. Publ., 26 pp., Cont.-in-part of U. S.  
 Ser. No. 632,624.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002039793	A1	20020404	US 2001-920627	20010803
US 6794195	B2	20040921		
EP 1557422	A2	20050727	EP 2004-78499	20010803
EP 1557422	A3	20060705		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
US 2003003592	A1	20030102	US 2002-193246	20020712
US 2003008408	A1	20030109	US 2002-193244	20020712
US 2003013204	A1	20030116	US 2002-193245	20020712
US 2003013202	A1	20030116	US 2002-193249	20020712
US 2004229370	A1	20041118	US 2004-788264	20040301
US 7060503	B2	20060613		
US 2006281185	A1	20061214	US 2006-448903	20060608
PRIORITY APPLN. INFO.:			US 2000-632624	A2 20000804
			EP 2001-956112	A3 20010803
			US 2001-920627	A1 20010803
			US 2004-788264	A1 20040301
AB	The invention concerns indicator mols. for detecting the presence or concentration of an analyte in a medium, such as a liquid, and to methods for achieving such detection. More particularly, the invention relates to copolymer macromols. containing relatively hydrophobic indicator component monomers, and hydrophilic monomers, such that the macromol. is capable of use in an aqueous environment.			
IT	408306-38-7P 408306-39-8P 408306-40-1P 408306-41-2P RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses) (detection of analytes in aqueous environments)			
RN	408306-38-7 CAPLUS			
CN	Boronic acid, [2-[[[10-[[[(2-boronophenyl)methyl][2-(2-hydroxyethoxy)ethyl]amino)methyl]-9-anthracenyl)methyl][3-[(2-methyl-1-oxo-2-propenyl)amino]propyl]amino)methyl]phenyl]- (9CI) (CA INDEX NAME)			

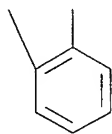
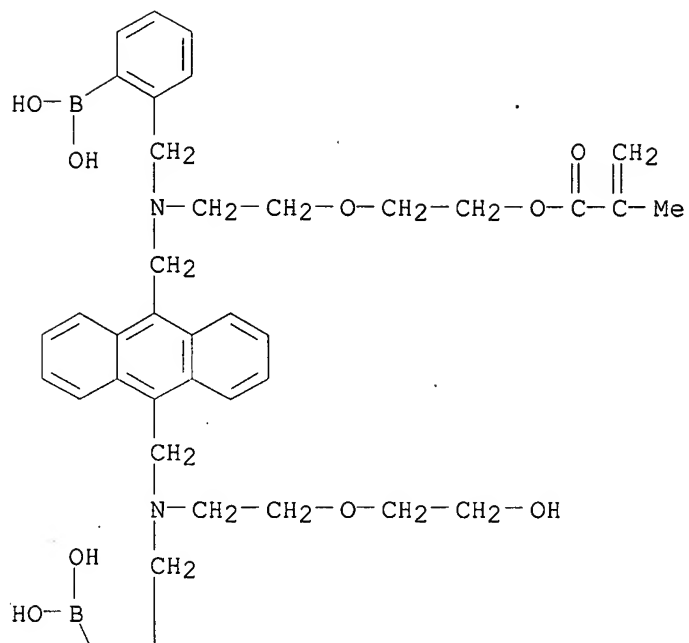


RN 408306-39-8 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[[3-[(2-methyl-1-oxo-2-propenyl)amino]propyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)





RN 408306-40-1 CAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-[2-[[[(2-boronophenyl)methyl][[10-[[[(2-boronophenyl)methyl][2-(2-hydroxyethoxy)ethyl]amino]methyl]-9-anthracenyl]methyl]amino]ethoxy]ethyl ester (9CI) (CA INDEX NAME)



RN 408306-41-2 CAPLUS  
 CN Boronic acid, [9,10-anthracenediylbis[methylene[[2-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]ethyl]imino]methylene-2,1-phenylene]]bis- (9CI) (CA INDEX NAME)

